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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	DEC 01	ChemPort single article sales feature unavailable
NEWS	3	APR 03	CAS coverage of exemplified prophetic substances enhanced
NEWS	4	APR 07	STN is raising the limits on saved answers
NEWS	5	APR 24	CA/CAplus now has more comprehensive patent assignee information
NEWS	6	APR 26	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS	7	APR 28	CAS patent authority coverage expanded
NEWS	8	APR 28	ENCOMPLIT/ENCOMPLIT2 search fields enhanced
NEWS	9	APR 28	Limits doubled for structure searching in CAS REGISTRY
NEWS	10	MAY 08	STN Express, Version 8.4, now available
NEWS	11	MAY 11	STN on the Web enhanced
NEWS	12	MAY 11	BEILSTEIN substance information now available on STN Easy
NEWS	13	MAY 14	DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format
NEWS	14	MAY 15	INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS	15	MAY 28	CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS	16	JUN 01	CAS REGISTRY Source of Registration (SR) searching enhanced on STN
NEWS	17	JUN 26	NUTRACEUT and PHARMAML no longer updated
NEWS	18	JUN 29	IMSCOPROFILE now reloaded monthly
NEWS	19	JUN 29	EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields
NEWS	20	JUL 09	PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
NEWS	21	JUL 14	USGENE enhances coverage of patent sequence location (PSL) data
NEWS	22	JUL 27	CA/CAplus enhanced with new citing references
NEWS	23	JUL 16	GBFULL adds patent backfile data to 1855
NEWS	24	JUL 21	USGENE adds bibliographic and sequence information

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,
AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 10:25:31 ON 27 JUL 2009

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.22	0.22

FILE 'CAPLUS' ENTERED AT 10:25:51 ON 27 JUL 2009
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FILE COVERS 1907 - 27 Jul 2009 VOL 151 ISS 5
FILE LAST UPDATED: 26 Jul 2009 (20090726/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAplus family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer to NEWS 22.

=> s US 20070142639 A1/pn
L1 1 US 20070142639 A1/PN
(US20070142639/PN)

=> sel rn
E1 THROUGH E196 ASSIGNED

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.84	3.06

FILE 'REGISTRY' ENTERED AT 10:26:44 ON 27 JUL 2009
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STRUCTURE FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0
DICTIONARY FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0

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TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

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http://www.cas.org/support/stngen/stndoc/properties.html

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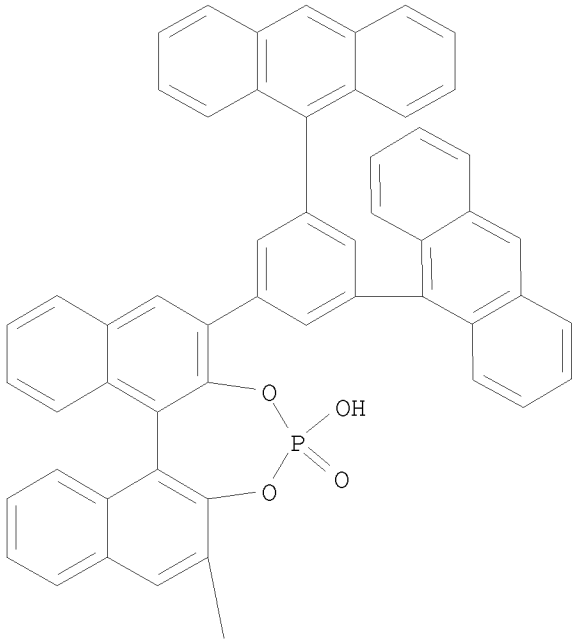
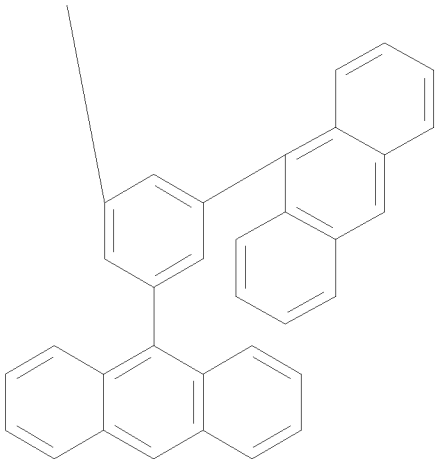
1336366 NRS>5
L3 4 L2 AND NRS>5

=> d l3 1-4

L3 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2009 ACS on STN
RN 861909-55-9 REGISTRY
ED Entered STN: 28 Aug 2005
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
2,6-bis(3,5-di-9-anthracenylphenyl)-4-hydroxy-, 4-oxide, (11bR)- (9CI)
(CA INDEX NAME)
MF C88 H53 O4 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

PAGE 1-A

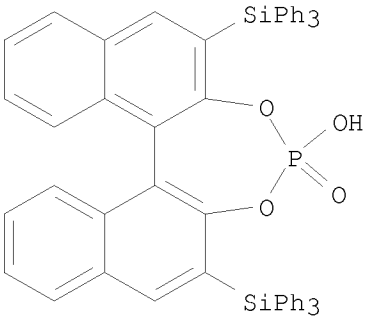




PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2009 ACS on STN
RN 791616-55-2 REGISTRY
ED Entered STN: 02 Dec 2004
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)
MF C56 H41 O4 P Si2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, USPAT2, USPATFULL

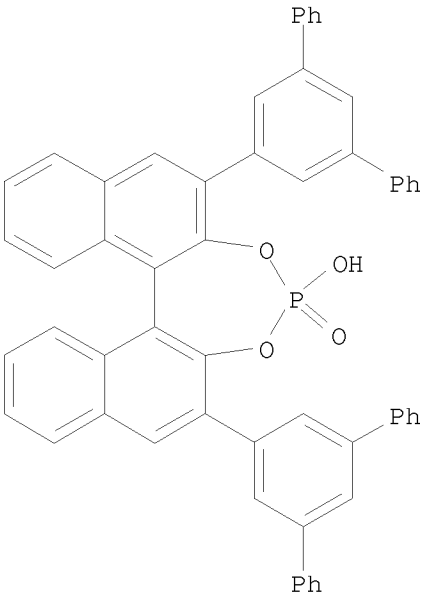


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

11 REFERENCES IN FILE CA (1907 TO DATE)
11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2009 ACS on STN
RN 361342-55-4 REGISTRY
ED Entered STN: 10 Oct 2001
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)

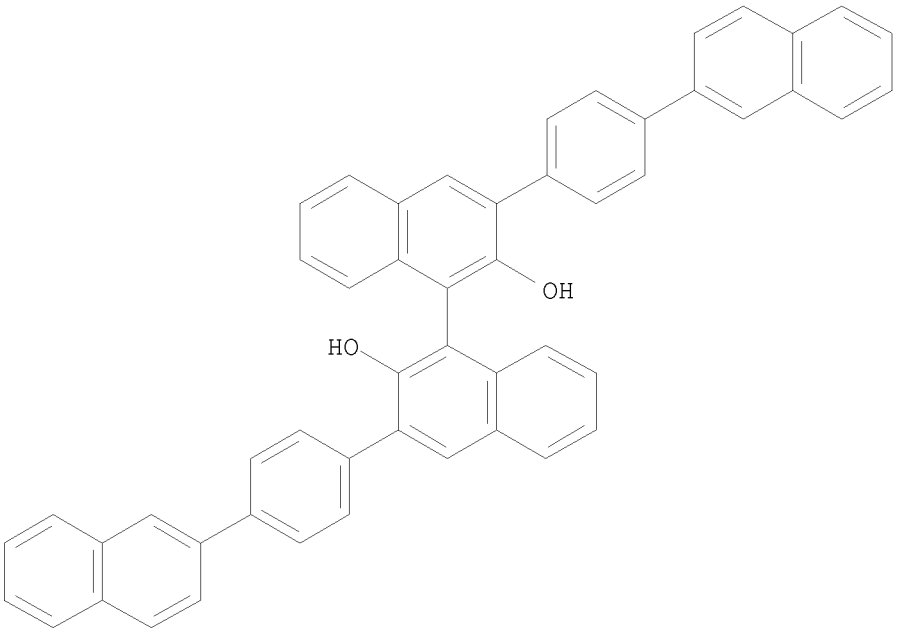
MF C56 H37 O4 P
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L3 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2009 ACS on STN
RN 309934-86-9 REGISTRY
ED Entered STN: 20 Dec 2000
CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)-
    (CA INDEX NAME)
MF C52 H34 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

5 REFERENCES IN FILE CA (1907 TO DATE)
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	14.99	18.05

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FILE COVERS 1907 - 27 Jul 2009 VOL 151 ISS 5
FILE LAST UPDATED: 26 Jul 2009 (20090726/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

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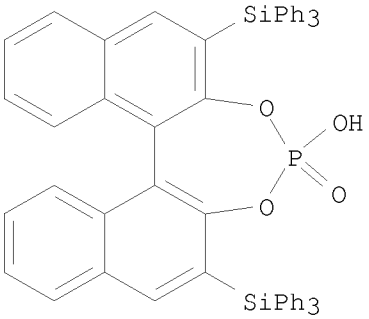
=> s l3
L4 17 L3

=> d l4 1-17 ibib abs hitstr

L4 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:506717 CAPLUS
DOCUMENT NUMBER: 150:563543
TITLE: Enantioselective aza-Darzens reaction catalyzed by a chiral phosphoric acid
AUTHOR(S): Akiyama, Takahiko; Suzuki, Tohru; Mori, Keiji
CORPORATE SOURCE: Department of Chemistry, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo, 171-8588, Japan
SOURCE: Organic Letters (2009), 11(11), 2445-2447
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aza-Darzens reaction of Et diazoacetate with aldimines, derived from Ph glyoxal, furnished cis-aziridine carboxylates with excellent enantioselectivities by means of a chiral phosphoric acid.
IT 791616-55-2
RL: CAT (Catalyst use); USES (Uses)
(stereoselective preparation of aziridine carboxylates via chiral phosphoric acid-catalyzed aza-Darzens reaction of diazoacetate with in situ generated aldimines from arylglyoxal with methoxyaniline)
RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

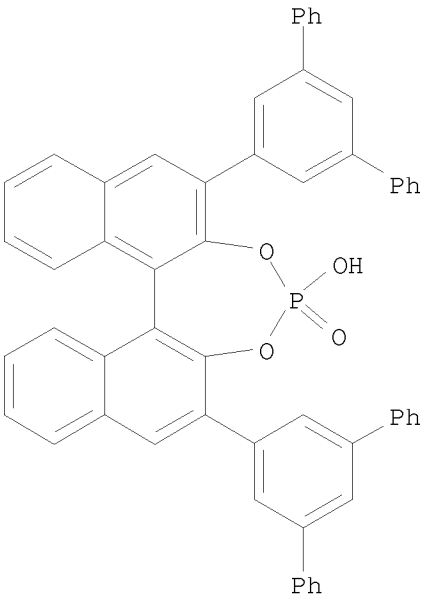
L4 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2009:437690 CAPLUS
DOCUMENT NUMBER: 151:8093
TITLE: Activation of hemiaminal ethers by chiral Bronsted acids for facile access to enantioselective two-carbon homologation using enecarbamates
AUTHOR(S): Terada, Masahiro; Machioka, Kyoko; Sorimachi, Keiichi
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
SOURCE: Angewandte Chemie, International Edition (2009), 48(14), 2553-2556
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Chiral phosphoric acids have been used to catalyze the title transformation for aromatic and aliphatic hemiaminal ethers. The process affords the corresponding products in good to high enantioselectivity. The method enables facile access to highly enantioenriched 1,3-diamine derivs.

IT 361342-55-4
RL: CAT (Catalyst use); USES (Uses)
(activation of hemiaminal ethers by chiral Bronsted acids for enantioselective two-carbon homologation of enecarbamates)

RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 101 THERE ARE 101 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

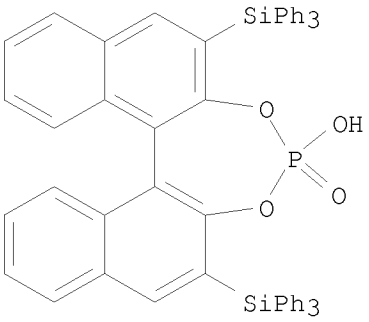
L4 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:322224 CAPLUS
DOCUMENT NUMBER: 150:422716
TITLE: Chiral Bronsted Acid-Catalyzed Enantioselective

α-Hydroxylation of β-Dicarbonyl Compounds
AUTHOR(S): Lu, Min; Zhu, Di; Lu, Yunpeng; Zeng, Xiaofei; Tan, Bin; Xu, Zhenjiang; Zhong, Guofu
CORPORATE SOURCE: Division of Chemistry & Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, 637371, Singapore
SOURCE: Journal of the American Chemical Society (2009), 131(13), 4562-4563
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 150:422716

AB A novel, facile, and highly enantioselective Bronsted acid-catalyzed α-hydroxylation of β-dicarbonyl compds., e.g. 2-alkoxycarbonyl-1-indanones, with up to 99:1 er using nitrosoarenes as the oxygen source has been developed. The results disclosed herein considerably extend the substrate scope for the α-aminoxylation, allowing expeditious, straightforward, and efficient access to valuable α-hydroxy-β-dicarbonyl compds. with the highest levels of enantiocontrol.

IT 791616-55-2
RL: CAT (Catalyst use); USES (Uses)
(chiral Bronsted acid-catalyzed enantioselective α-hydroxylation of β-diketones and β-keto esters using nitrosoarenes as oxygen source)

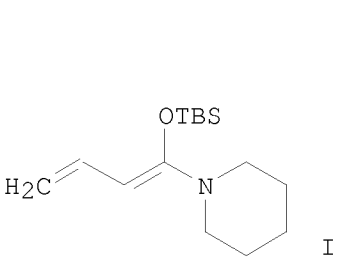
RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



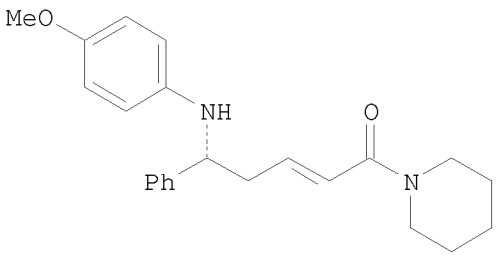
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 74 THERE ARE 74 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:1042086 CAPLUS
DOCUMENT NUMBER: 149:401711
TITLE: Bronsted Acid-Catalyzed, Enantioselective, Vinylogous Mannich Reaction of Vinylketene Silyl N,O-Acetals
AUTHOR(S): Giera, David S.; Sickert, Marcel; Schneider, Christoph
CORPORATE SOURCE: Institut fuer Organische Chemie, Universitaet Leipzig, Leipzig, 04103, Germany
SOURCE: Organic Letters (2008), 10(19), 4259-4262
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 149:401711
GI



I

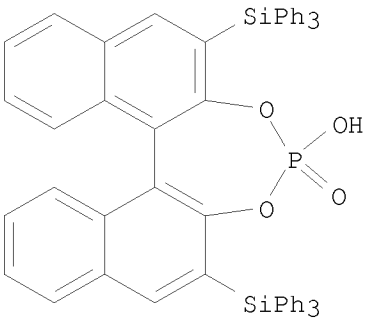


II

AB Vinylketene silyl N,O-acetals, e.g. I, undergo chiral phosphoric acid-catalyzed, vinylogous Mukaiyama-Mannich reactions with imines and afford δ-amino-α,β-unsatd. amides, e.g. II, in typically good yields, complete γ-regioselectivity, and up to 92% ee with catalyst loadings of as low as 1 mol %. The Mannich products can be readily manipulated to furnish valuable synthetic intermediates.

IT 791616-55-2
RL: CAT (Catalyst use); USES (Uses)
(chiral phosphoric acid-catalyzed regioselective and enantioselective vinylogous Mannich reaction of vinylketene silyl N,O-acetals with imines)

RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

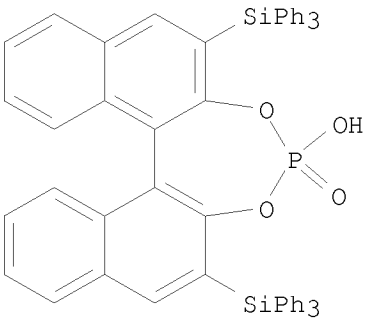
L4 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:837532 CAPLUS
DOCUMENT NUMBER: 149:201097
TITLE: Enantioselective BINOL-phosphoric acid catalyzed Pictet-Spengler reactions of N-benzyltryptamine
AUTHOR(S): Sewgobind, Nishant V.; Wanner, Martin J.; Ingemann, Steen; de Gelder, Rene; van Maarseveen, Jan H.; Hiemstra, Henk
CORPORATE SOURCE: Van't Hoff Institute for Molecular Sciences, University of Amsterdam, Amsterdam, 1018 WS, Neth.
SOURCE: Journal of Organic Chemistry (2008), 73(16), 6405-6408
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:201097

AB Optically active tetrahydro-β-carbolines were synthesized via an (R)-BINOL-phosphoric acid-catalyzed asym. Pictet-Spengler reaction of N-benzyltryptamine with a series of aromatic and aliphatic aldehydes. The tetrahydro-β-carbolines were obtained in yields ranging from 77% to 97% and with ee values up to 87%. The triphenylsilyl-substituted BINOL-phosphoric acid proved to be the catalyst of choice for the reaction with aromatic aldehydes. For the aliphatic aldehydes, 3,5-bistrifluoromethylphenyl-substituted BINOL-phosphoric acid was identified as the best catalyst.

IT 791616-55-2
RL: CAT (Catalyst use); USES (Uses)
(stereoselective preparation of tetrahydro-β-carbolines via BINOL-phosphoric acid catalyzed Pictet-Spengler reactions of N-benzyltryptamine with aromatic and aliphatic aldehydes)

RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

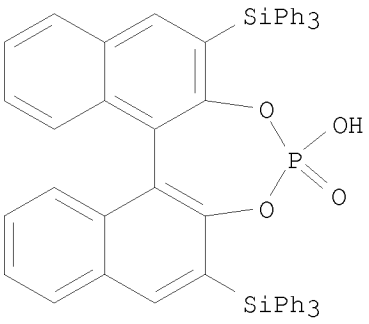
L4 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:708334 CAPLUS
DOCUMENT NUMBER: 149:79135
TITLE: Theoretical Study of the Mechanism of Hantzsch Ester Hydrogenation of Imines Catalyzed by Chiral BINOL-Phosphoric Acids
AUTHOR(S): Simon, Luis; Goodman, Jonathan M.
CORPORATE SOURCE: Department of Chemistry, Unilever Centre For Molecular Science Informatics, Cambridge, CB2 1EW, UK
SOURCE: Journal of the American Chemical Society (2008), 130(27), 8741-8747
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The mechanism of the Hantzsch ester hydrogenation of imines catalyzed by chiral BINOL-phosphoric acid has been investigated using DFT methods. Despite the importance of this reaction, there are a number of possible detailed mechanisms, and the preferred pathway has not been firmly established. Our calcns. show that the catalyst not only activates the imine group for the reaction by acting as a Bronsted acid but also

establishes an interaction with the Hantzsch ester that can lead to an explanation for the enantioselectivity.

IT 791616-55-2
RL: CAT (Catalyst use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(MacMillan catalyst; theor. study of the mechanism of Hantzsch ester hydrogenation of imines catalyzed by chiral BINOL-phosphoric acids)

RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



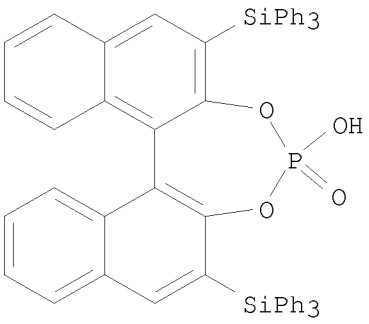
OS.CITING REF COUNT: 10 THERE ARE 10 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:644782 CAPLUS
DOCUMENT NUMBER: 149:200731
TITLE: Chiral phosphoric acid catalyzed enantioselective Friedel-Crafts alkylation of indoles with nitroalkenes: cooperative effect of 3Å molecular sieves
AUTHOR(S): Itoh, Junji; Fuchibe, Kohei; Akiyama, Takahiko
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo, 171-8588, Japan
SOURCE: Angewandte Chemie, International Edition (2008), 47(21), 4016-4018
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:200731

AB Friedel-Crafts alkylation of indoles with nitroalkenes proceeded in the presence of chiral phosphoric acid and 3Å mol. sieves to give Friedel-Crafts adducts with excellent enantioselectivities.

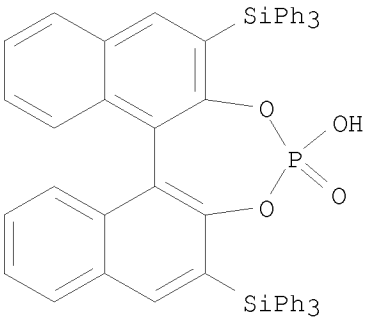
IT 791616-55-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective preparation of nitroethyl indoles via chiral phosphoric acid catalyzed Friedel-Crafts alkylation of indoles with nitroalkenes with addition of 3Å mol. sieves)

RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



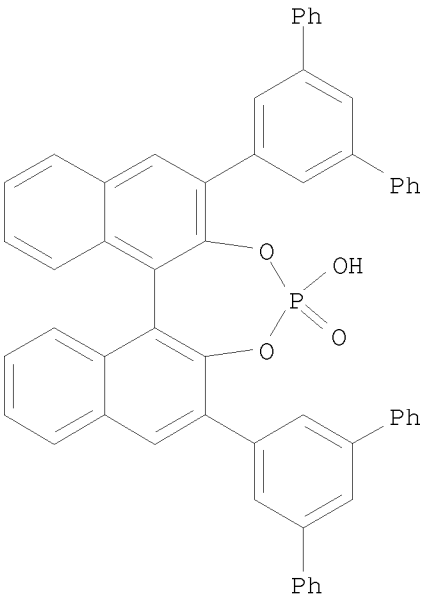
OS.CITING REF COUNT: 26 THERE ARE 26 CAPLUS RECORDS THAT CITE THIS RECORD (26 CITINGS)
REFERENCE COUNT: 80 THERE ARE 80 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:601206 CAPLUS
DOCUMENT NUMBER: 150:143830
TITLE: Asymmetric counterion pair catalysis: an enantioselective Bronsted acid-catalyzed protonation
AUTHOR(S): Rueping, Magnus; Theissmann, Thomas; Raja, Sadiya; Bats, Jan W.
CORPORATE SOURCE: Institute of Organic Chemistry and Chemical Biology, Frankfurt, 60438, Germany
SOURCE: Advanced Synthesis & Catalysis (2008), 350(7+8), 1001-1006
CODEN: ASCAF7; ISSN: 1615-4150
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 150:143830
AB A new asym. Bronsted acid-catalyzed cascade reaction involving a 1,4-addition, enantioselective protonation and 1,2-addition has been developed. This organo-catalytic cascade not only provides for the first time 3- and 2,3-substituted tetrahydroquinolines and octahydroacridines in good yields with high dia- and enantioselectivities under mild reaction conditions but addnl. represents the first example of a chiral Bronsted acid-catalyzed protonation reaction in an organo-catalytic domino reaction. Furthermore, the new Bronsted acid-catalyzed hydride-proton-hydride transfer cascade can be applied to prepare new mol. scaffolds with up to three new stereocenters in an efficient one-pot reaction sequence.
IT 791616-55-2
RL: CAT (Catalyst use); USES (Uses)
(asym. Bronsted acid-catalyzed cascade reaction involving a 1,4-addition, enantioselective protonation and 1,2-addition)
RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



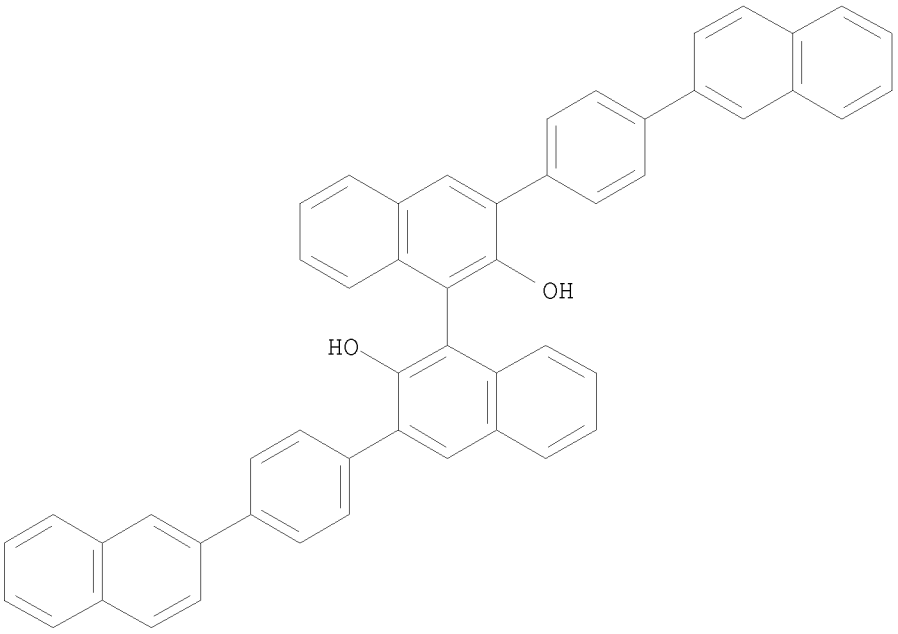
OS.CITING REF COUNT: 13 THERE ARE 13 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:1036156 CAPLUS
DOCUMENT NUMBER: 149:267837
TITLE: Chiral phosphoric acid-catalyzed enantioselective aza-Friedel-Crafts reaction of indoles
AUTHOR(S): Terada, Masahiro; Yokoyama, Shigeko; Sorimachi, Keiichi; Uraguchi, Daisuke
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Aramaki, Aoba-ku, Sendai, 980-8578, Japan
SOURCE: Advanced Synthesis & Catalysis (2007), 349(11+12), 1863-1867
CODEN: ASCAF7; ISSN: 1615-4150
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:267837
AB A highly enantioselective 1,2-aza-Friedel-Crafts reaction of N-tert-butyldimethylsilylindole with N-tert-butoxycarbonyl aromatic imines is demonstrated using a BINOL-derived monophosphoric acid catalyst. The present approach provides efficient access to 3-indolylmethanamines with aryl substituents in excellent enantioselectivities (up to 98% ee). An inversion in the sense of enantioselection was found between monophosphoric acid catalysts bearing different substituents introduced at the 3,3'-position of binaphthyl backbone. The authors also calculated the three-dimensional structure of the monophosphoric acid catalysts to speculate on the inversion of the stereochem. outcome.
IT 361342-55-4
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(DFT study; chiral binaphthyldiyl phosphoric acid-catalyzed enantioselective aza-Friedel-Crafts reaction of indoles with N-Boc aromatic imines)
RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



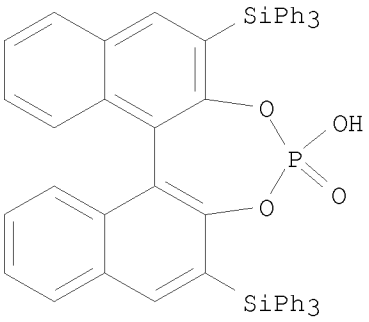
OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)
REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:774425 CAPLUS
DOCUMENT NUMBER: 147:211676
TITLE: Catalytic asymmetric aziridination of imines
AUTHOR(S): Wipf, Peter; Lyon, Michael A.
CORPORATE SOURCE: Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, 15260, USA
SOURCE: ARKIVOC (Gainesville, FL, United States) (2007), (12), 91-98
CODEN: AGFUAR
URL: http://content.arkat-usa.org/ARKIVOC/JOURNAL_CONTENT/manuscripts/2007/MJ-2328BP%20as%20published%20mainmanuscript.pdf
PUBLISHER: Arkat USA Inc.
DOCUMENT TYPE: Journal; (online computer file)
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:211676
AB Introduction of bulky arene substituents into the 3- and 3'-positions of binaphthol boronates led to a significant improvement of chiral induction in the aziridination of benzylidenebenzhydrylamines.
IT 309934-86-9
RL: CAT (Catalyst use); USES (Uses)
(aziridination of benzylidenebenzhydrylamines using a binaphthol boronate catalyst)
RN 309934-86-9 CAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)-(CA INDEX NAME)



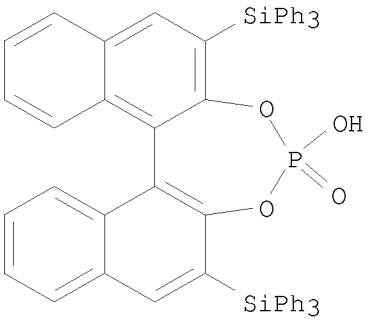
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:1250315 CAPLUS
DOCUMENT NUMBER: 146:206179
TITLE: Enantioselective Direct Aza Hetero-Diels-Alder Reaction Catalyzed by Chiral Bronsted Acids
AUTHOR(S): Liu, Hua; Cun, Lin-Feng; Mi, Ai-Qiao; Jiang, Yao-Zhong; Gong, Liu-Zhu
CORPORATE SOURCE: Hefei National Laboratory for Physical Sciences at the Microscale and Department of Chemistry, University of Science and Technology of China, Hefei, 230026, Peop. Rep. China
SOURCE: Organic Letters (2006), 8(26), 6023-6026
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 146:206179
AB The chiral Bronsted acid-catalyzed asym. direct aza hetero-Diels-Alder reaction is described. The phosphoric acids, prepared from BINOL and H8-BINOL derivs., show catalytic ability for the reaction of cyclohexenone with N-PMP-benzaldimine. A chiral phosphoric acid, derived from 3,3-di(4-chloropheneyl)-H8-BINOL, exhibited superior enantioselectivity, affording fairly good yields and enantioselectivities for the reaction of a range of aromatic aldimines with cyclohexenone.
IT 791616-55-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(enantioselective direct aza hetero-Diels-Alder reaction catalyzed by chiral Bronsted acids)
RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



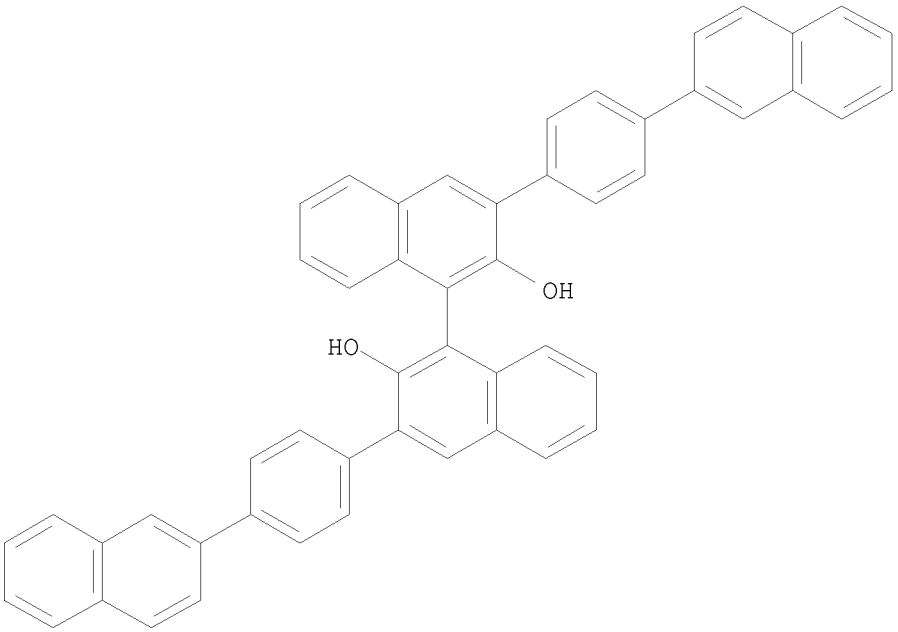
OS.CITING REF COUNT: 44 THERE ARE 44 CAPLUS RECORDS THAT CITE THIS RECORD (47 CITINGS)
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1302706 CAPLUS
DOCUMENT NUMBER: 144:212474
TITLE: Enantioselective Organocatalytic Reductive Amination
AUTHOR(S): Storer, R. Ian; Carrera, Diane E.; Ni, Yike; MacMillan, David W. C.
CORPORATE SOURCE: Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SOURCE: Journal of the American Chemical Society (2006), 128(1), 84-86
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:212474
AB The first enantioselective organocatalytic reductive amination reaction has been accomplished. The development of a new chiral phosphoric acid catalyst has provided a convenient strategy for the enantioselective construction of protected primary amines and provided a highly stereoselective method for the reductive amination of heterocyclic amines. A diverse spectrum of ketone and amine substrates can be accommodated in high yield and excellent enantioselectivity. This new protocol realizes a key benefit of reductive amination vs. imine reduction, in that ketimines derived from dialkyl ketones are unstable to isolation, a fundamental limitation that is comprehensively bypassed using this direct organocatalytic reductive amination.
IT 791616-55-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(asym. synthesis of secondary amines by reductive amination of ketones with primary aryl or heteroaryl amines catalyzed by binaphthalenephosphates)
RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 197 THERE ARE 197 CAPLUS RECORDS THAT CITE THIS RECORD (209 CITINGS)
REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:821039 CAPLUS
DOCUMENT NUMBER: 143:367008
TITLE: Iodomethylzinc phosphates: powerful reagents for the cyclopropanation of alkenes
AUTHOR(S): Lacasse, Marie-Christine; Poulard, Cyril; Charette, Andre B.
CORPORATE SOURCE: Departement de Chimie, Universite de Montreal, Montreal, QC, H3C 3J7, Can.
SOURCE: Journal of the American Chemical Society (2005), 127(36), 12440-12441
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:367008
AB A new family of zinc carbenoids derived from phosphoric acids was developed and used in the cyclopropanation of allylic alcs. and ethers and also of unfunctionalized olefins. The use of the chiral phosphoric acid of a 3,3'-disubstituted BINOL led to efficient stereocontrol, affording the cyclopropanes of allylic and homoallylic ethers with complete conversions and high ee. A catalytic version of this reaction using 10 mol% of the chiral phosphate reagent was also developed.
IT 309934-86-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of naphthalenylphenyl-substituted BINOL phosphate from BINOL derivative)
RN 309934-86-9 CAPLUS
CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)- (CA INDEX NAME)



OS.CITING REF COUNT: 17 THERE ARE 17 CAPLUS RECORDS THAT CITE THIS RECORD (17 CITINGS)
REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

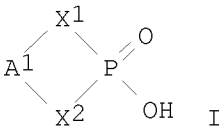
L4 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:696866 CAPLUS
DOCUMENT NUMBER: 143:193554
TITLE: Process for production of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles using chiral phosphoric acid derivative
INVENTOR(S): Terada, Masahiro; Uraguchi, Daisuke; Sorimachi, Keiichi; Shimizu, Hideo
PATENT ASSIGNEE(S): Takasago International Corporation, Japan
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070875	A1	20050804	WO 2005-JP962	20050126
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20070142639	A1	20070621	US 2006-587279	20061012

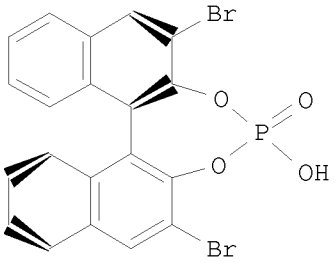
PRIORITY APPLN. INFO.: JP 2004-17725 A 20040126
WO 2005-JP962 W 20050126

OTHER SOURCE(S): MARPAT 143:193554

GI



I



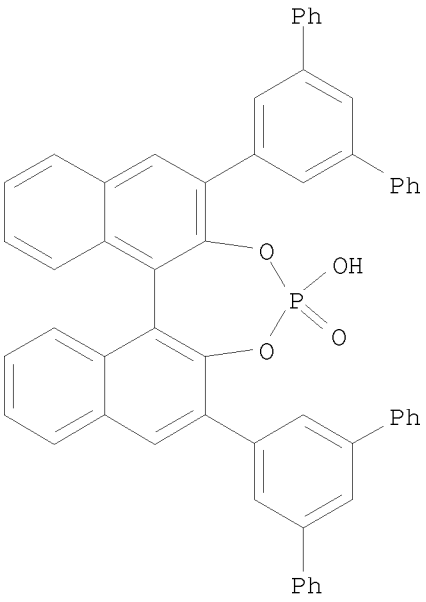
II

AB A process for the production of amines comprises reacting an imine with a nucleophilic compound (except trialkylsilyl vinyl ethers) in the presence of a phosphoric acid derivative represented by the general formula (I) (wherein A1 = a spacer; X1, X2 = independently a divalent nonmetal atom or divalent nonmetal atomic group; Y1 = O, S). The invention provides a process by which amines (particularly optically active amines) useful as intermediates of drugs, agricultural chems., or the like can be produced without special post-treatment in high yield at high optical purity; and phosphoric acid derivs. (particularly optically active phosphoric acid derivs.) useful in the production of the amines. Thus, 0.11 mmol acetylacetone was added to a solution of 0.002 phosphoric acid derivative (II) and 0.1 mmol PhCH:NCOPh in 800 μL CDCl3 under N and stirred for 5.5 h to give 99% optically active PHCH(NHPh)CH(COMe)2 (61% optical yield).

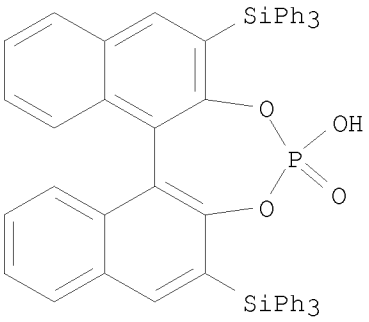
IT 361342-55-4 791616-55-2 861909-55-9
RL: CAT (Catalyst use); USES (Uses)
(preparation of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles in presence of chiral phosphoric acid derivative)

RN 361342-55-4 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)

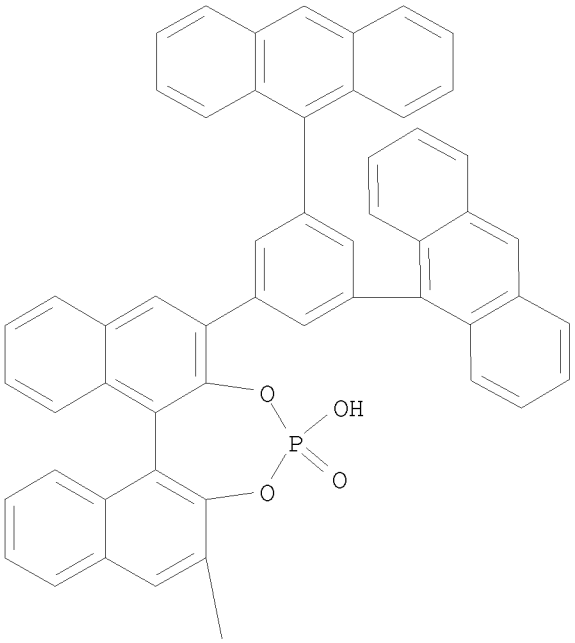


RN 791616-55-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)

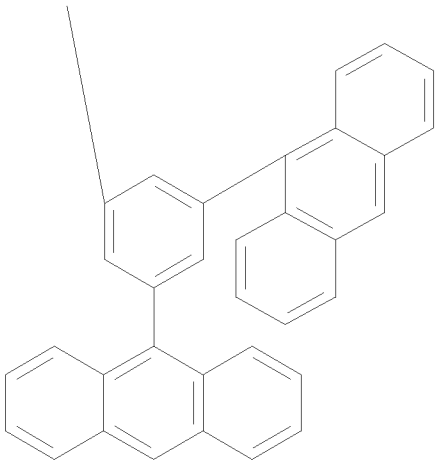


RN 861909-55-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(3,5-di-9-anthracenylphenyl)-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

PAGE 1-A



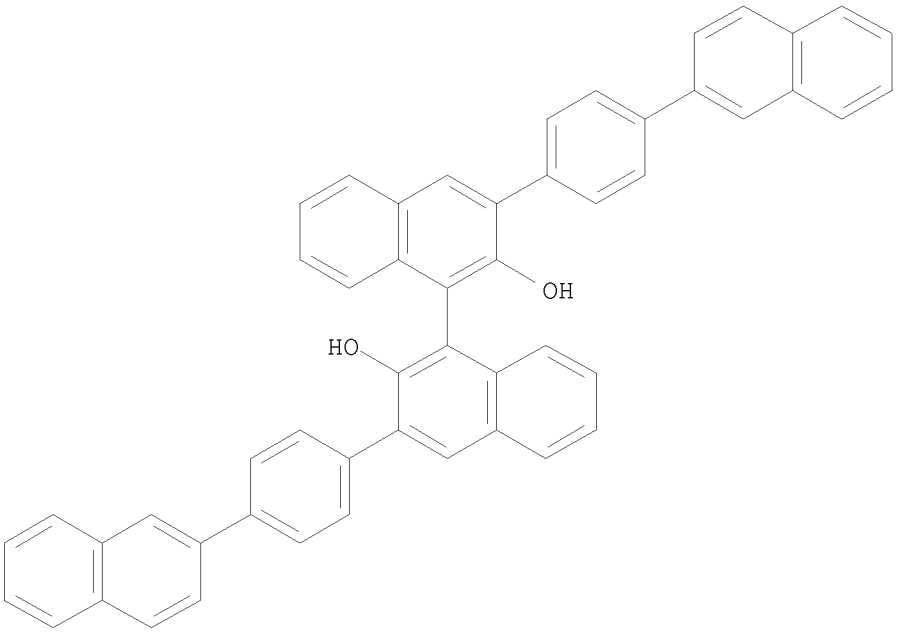
PAGE 2-A



IT 309934-86-9
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles in presence of chiral phosphoric acid derivative)

RN 309934-86-9 CAPLUS

CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)-
(CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:965208 CAPLUS
DOCUMENT NUMBER: 141:411087
TITLE: Preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith
INVENTOR(S): Akiyama, Takahiko
PATENT ASSIGNEE(S): Toagosei Co., Ltd., Japan
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096753	A1	20041111	WO 2004-JP5602	20040420
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1623971	A1	20060208	EP 2004-728421	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				

CN 1780810	A	20060531	CN 2004-80011149		20040420
CN 100410234	C	20080813			
US 20060276329	A1	20061207	US 2005-554369		20051025
US 7517828	B2	20090414			
PRIORITY APPLN. INFO.:			JP 2003-121706	A	20030425
			WO 2004-JP5602	W	20040420

OTHER SOURCE(S): MARPAT 141:411087
GI

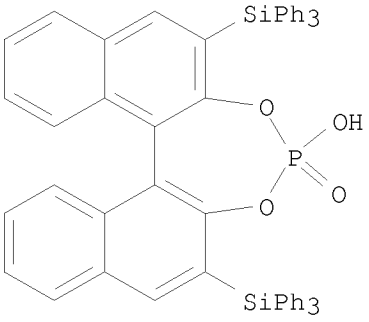
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1, R2, R3, R4 = H, halo, etc.], II [R1, R2 = H, halo, etc.] were prepared Asym. Mannich, aza-Diels-Alder reactions using Bronsted acids I, II were accomplished. For example, asym. Mannich reaction using 2-[(phenylmethylene)amino]phenol, compound III in the presence of catalyst (R)-I [R1 = R2 = 4-nitrophenyl; R3 = R4 = H] afforded compound IV in 98% yield, 89% ee. Of note, disclosed invention provided usable compds. as an asym. synthesis catalyst which can be easily synthesized without using any metal such as a lanthanide group element; a method of asym. synthesis with the compound; and a chiral compound obtained by the asym. synthesis method.

IT 791616-55-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith)

RN 791616-55-2 CAPLUS

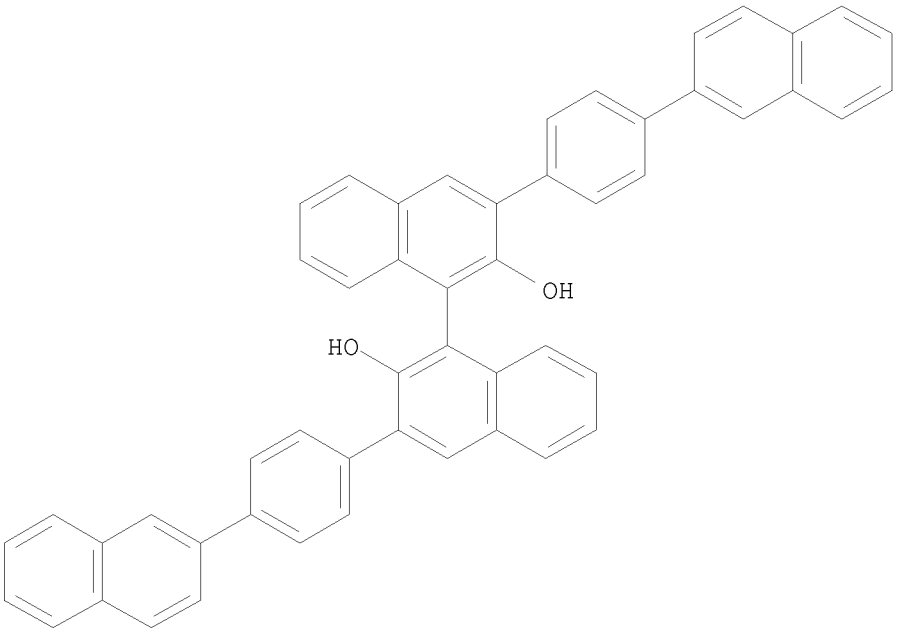
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(triphenylsilyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



IT 309934-86-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith)

RN 309934-86-9 CAPLUS

CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:691761 CAPLUS
DOCUMENT NUMBER: 135:257051
TITLE: Optically active phosphate derivative and its use
INVENTOR(S): Inanaga, Junji
PATENT ASSIGNEE(S): Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1134209	A1	20010919	EP 2001-105920	20010309
EP 1134209	B1	20030827		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 20010031887	A1	20011018	US 2001-801041	20010308
US 6391926	B2	20020521		
JP 2001328995	A	20011127	JP 2001-68370	20010312
PRIORITY APPLN. INFO.:			JP 2000-73997 A	20000313

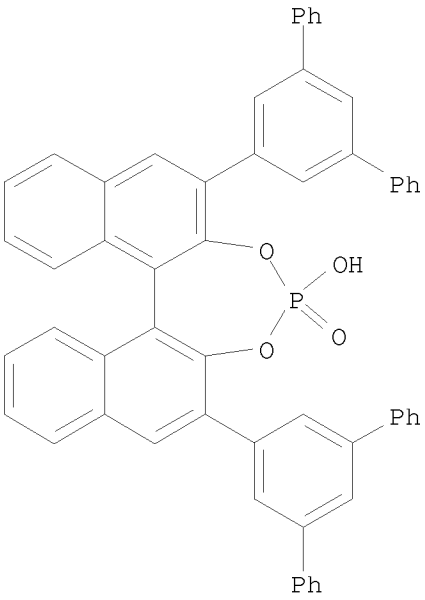
AB The present invention includes optically active binaphthol derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'diol (I), optically active phosphate derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'-diyl phosphonic acid (II), processes for their production, and a chiral shift reagent comprising the derivative of II. Thus, (R)-I (preparation and spectral data given) was treated with phosphorous oxychloride and hydrolyzed to give (R)-II (70%), the efficacy of which as an asymmetry identifying agent, when subjected to (±)-1-phenylethyl alc., (±)-1-phenyl-1-methoxy acetic acid, (±)-2-octanol, (±)-2-butanol,

and (±)-phenylmethyl sulfoxide, was measured by NMR.

IT 361342-55-4
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(use as chiral shift reagent on racemic compds.)

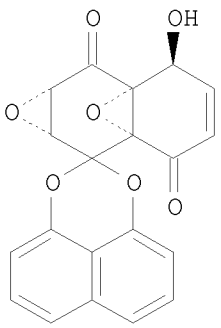
RN 361342-55-4 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:626423 CAPLUS
DOCUMENT NUMBER: 134:17332
TITLE: Formal Total Synthesis of (+)-Diepoxin σ
AUTHOR(S): Wipf, Peter; Jung, Jae-Kyu
CORPORATE SOURCE: Department of Chemistry, University of Pittsburgh, Pittsburgh, PA, 15260, USA
SOURCE: Journal of Organic Chemistry (2000), 65(20), 6319-6337
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:17332
GI



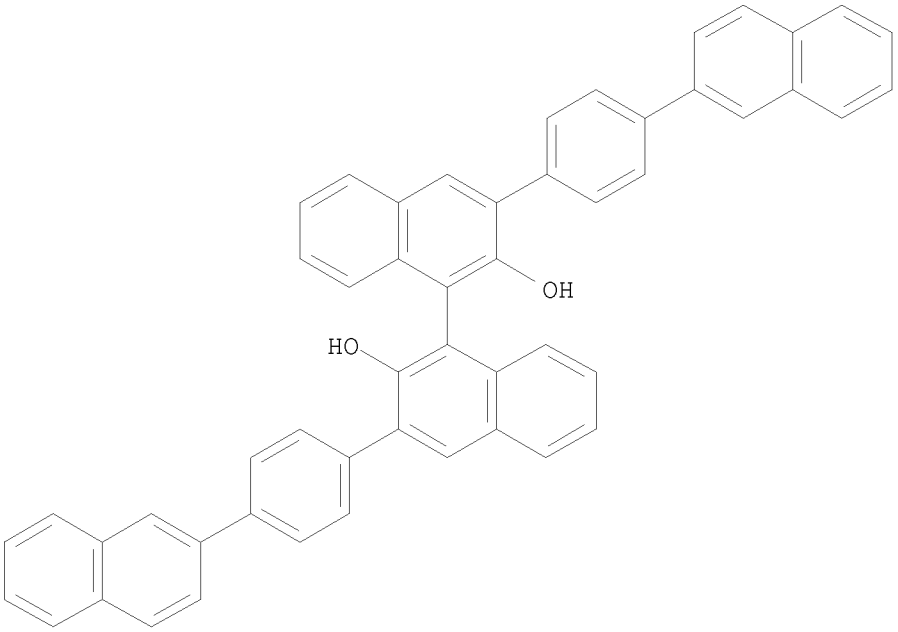
I

AB The highly oxygenated antifungal anticancer natural product (±)-diepoxin σ was prepared in 10 steps and in 15% overall yield from O-methylnaphthazarin. Highlights of the synthetic work include an Ullmann coupling and a possibly biomimetic oxidative spirocyclization for the introduction of the naphthalene ketal as well as the use of a retro-Diels-Alder reaction to unmask the reactive enone moiety in the naphthoquinone bisepoxide ring system. A novel highly bulky chiral binaphthol ligand was developed for a boron-mediated Diels-Alder reaction that constitutes a formal asym. total synthesis of (+)-diepoxin σ (I).

IT 309934-86-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(formal total synthesis of (+)-diepoxin σ)

RN 309934-86-9 CAPLUS

CN [1,1'-Binaphthalene]-2,2'-diol, 3,3'-bis[4-(2-naphthalenyl)phenyl]-, (1R)- (CA INDEX NAME)



OS.CITING REF COUNT: 78 THERE ARE 78 CAPLUS RECORDS THAT CITE THIS RECORD (80 CITINGS)

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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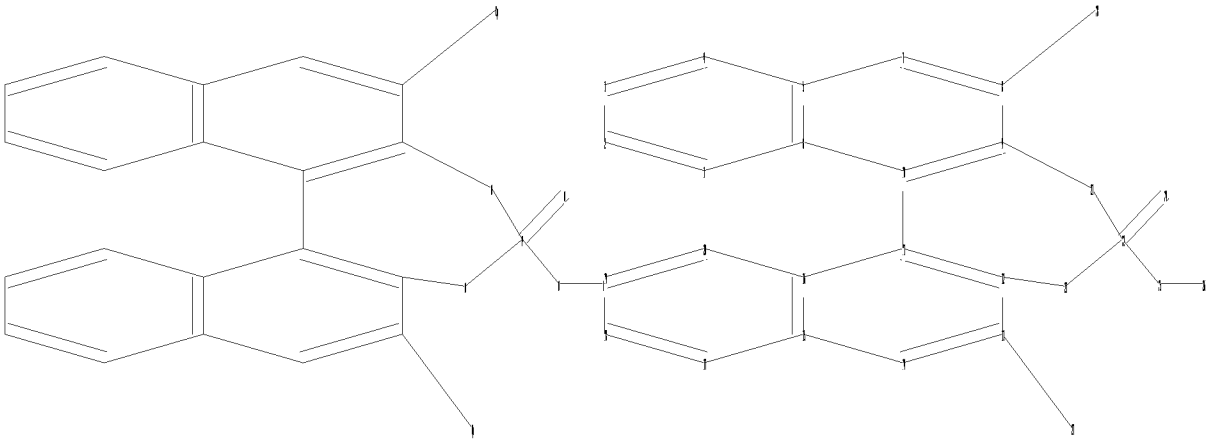

chain nodes :
24 25 26 27 28
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
chain bonds :
8-28 13-27 22-24 22-25 25-26
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 5-7 6-10 7-8 8-9 9-10 9-21 10-11 11-12 11-16
12-13 12-23 13-14 14-15 15-16 15-17 16-20 17-18 18-19 19-20 21-22 22-23
exact/norm bonds :
8-28 9-21 10-11 12-23 13-27 21-22 22-23
exact bonds :
25-26
normalized bonds :
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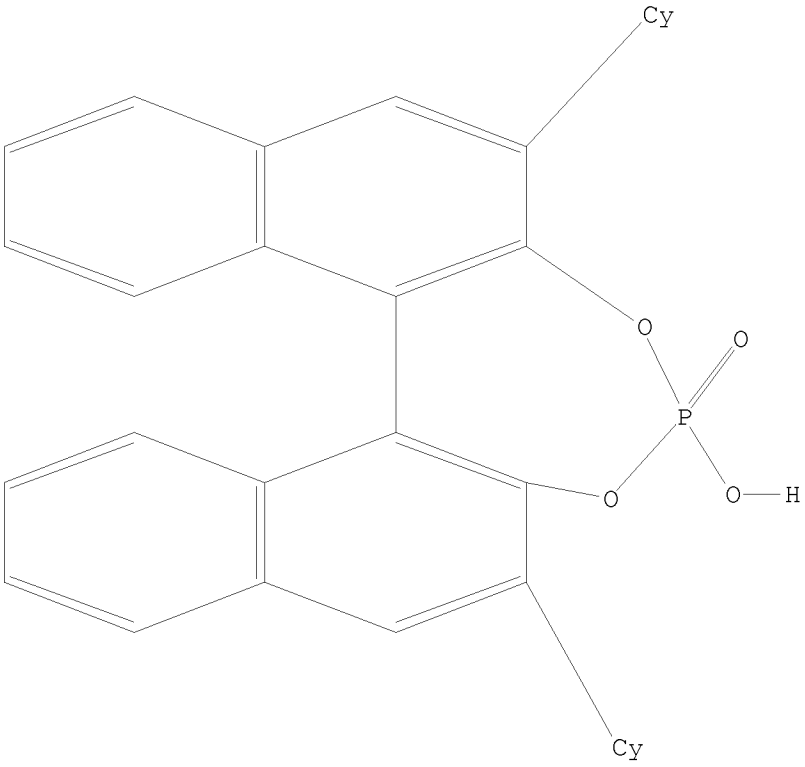
Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom
20:Atom 21:Atom 22:Atom 23:Atom 24:CLASS 25:CLASS 26:CLASS 27:Atom 28:Atom

L5 STRUCTURE UPLOADED

=> d l5
L5 HAS NO ANSWERS
L5 STR



Structure attributes must be viewed using STN Express query preparation.

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	107.38	125.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-13.94	-13.94

FILE 'REGISTRY' ENTERED AT 10:42:32 ON 27 JUL 2009
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STRUCTURE FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0
DICTIONARY FILE UPDATES: 24 JUL 2009 HIGHEST RN 1168220-55-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and

predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> s l5 full
FULL SEARCH INITIATED 10:42:37 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   547 TO ITERATE

100.0% PROCESSED   547 ITERATIONS   78 ANSWERS
SEARCH TIME: 00.00.01

L6   78 SEA SSS FUL L5

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L6   ANSWER 1 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN   1152438-32-8 REGISTRY
ED   Entered STN: 05 Jun 2009
CN   INDEX NAME NOT YET ASSIGNED
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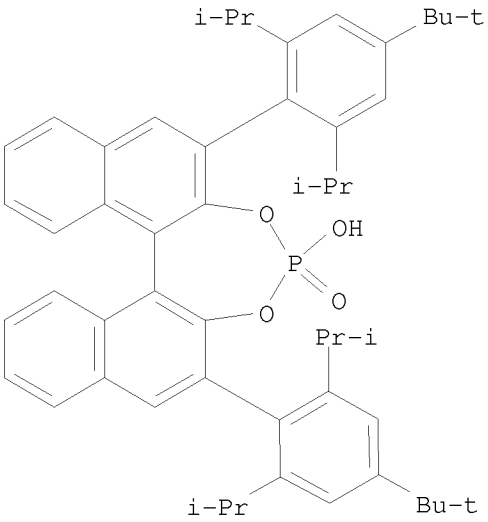
LC   STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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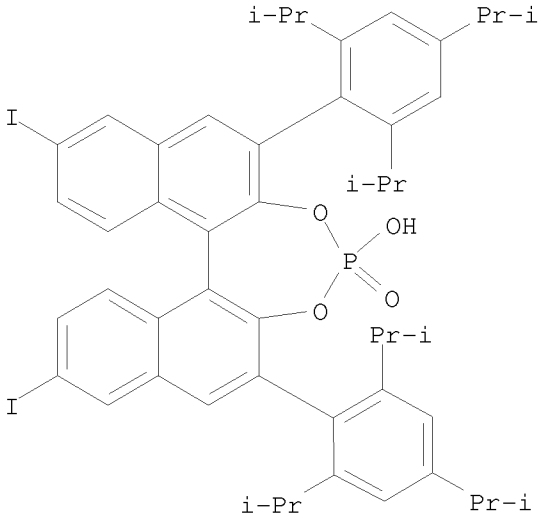
L6   ANSWER 2 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN   1111649-51-4 REGISTRY
ED   Entered STN: 25 Feb 2009
CN   Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
     4-hydroxy-9,14-diiodo-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide,
     (11bR)- (CA INDEX NAME)
MF   C50 H55 I2 O4 P
SR   CA
LC   STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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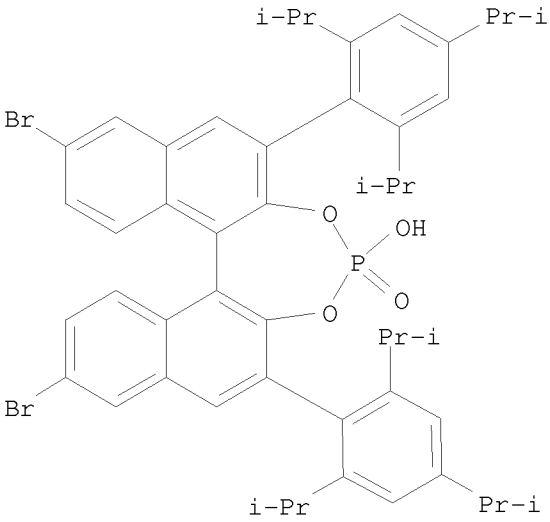
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 3 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1111649-50-3 REGISTRY
ED Entered STN: 25 Feb 2009
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 9,14-dibromo-4-hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide, (11bR)- (CA INDEX NAME)
MF C50 H55 Br2 O4 P
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 4 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1100298-36-9 REGISTRY
ED Entered STN: 03 Feb 2009
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
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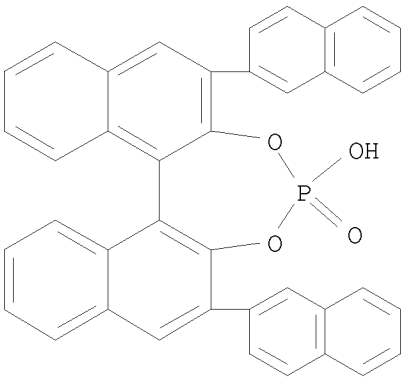
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 5 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1100298-35-8 REGISTRY
ED Entered STN: 03 Feb 2009
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
4-hydroxy-2,6-bis[4-(1-naphthalenyl)phenyl]-, 4-oxide (CA INDEX NAME)
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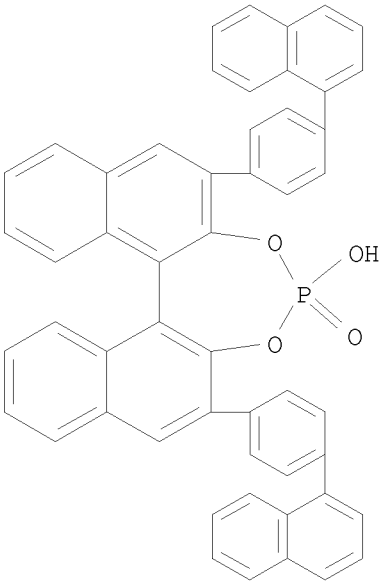
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



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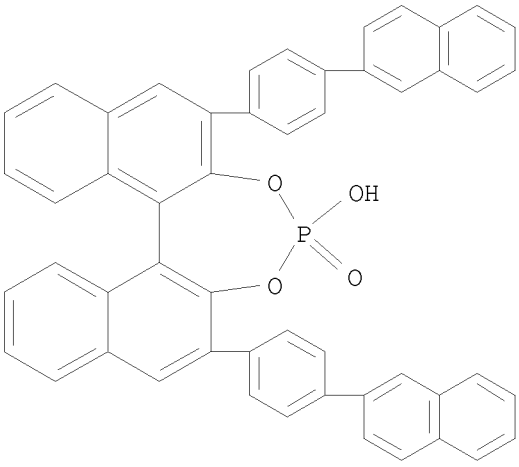
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 6 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1100298-34-7 REGISTRY
ED Entered STN: 03 Feb 2009
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide (CA INDEX NAME)
MF C52 H33 O4 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 7 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1100298-33-6 REGISTRY
ED Entered STN: 03 Feb 2009
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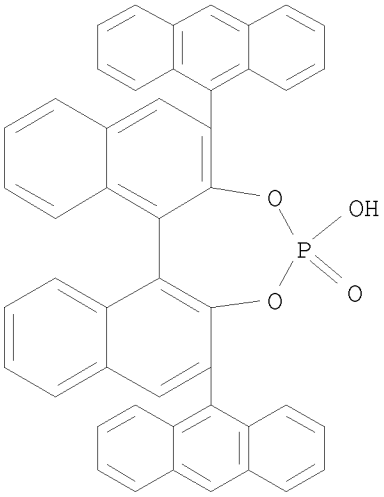
MF C48 H29 O4 P
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



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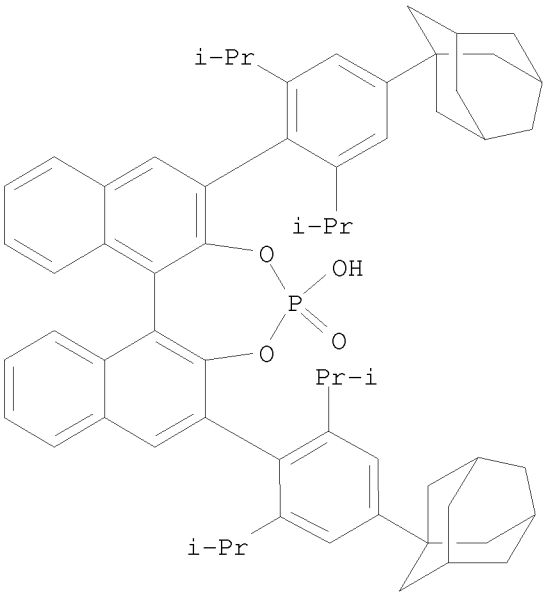
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 8 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1087345-30-9 REGISTRY
ED Entered STN: 21 Dec 2008
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin,
2,6-bis[2,6-bis(1-methylethyl)-4-tricyclo[3.3.1.13,7]dec-1-ylphenyl]-4-
hydroxy-, 4-oxide, (11bS)- (CA INDEX NAME)
MF C64 H73 O4 P
SR CA
LC STN Files: CA, CAPLUS



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 9 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1083057-97-9 REGISTRY
ED Entered STN: 11 Dec 2008
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide, silver(1+) salt (1:1), (11bS)- (CA INDEX NAME)
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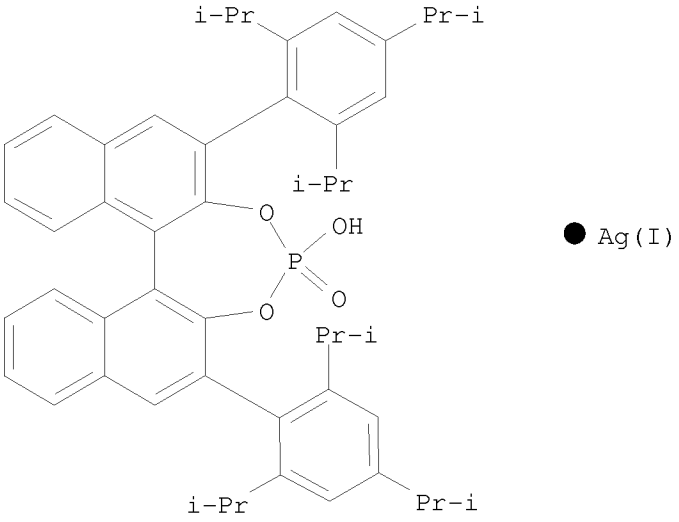
SR CA
LC STN Files: CA, CAPLUS, CASREACT
CRN (874948-63-7)



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L6 ANSWER 10 OF 78 REGISTRY COPYRIGHT 2009 ACS on STN
RN 1051435-82-5 REGISTRY
ED Entered STN: 22 Sep 2008
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[4-(9-anthracenyl)-2,6-bis(1-methylethyl)phenyl]-4-hydroxy-, 4-oxide, (11bS)- (CA INDEX NAME)
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SR CA
LC STN Files: CA, CAPLUS, CASREACT

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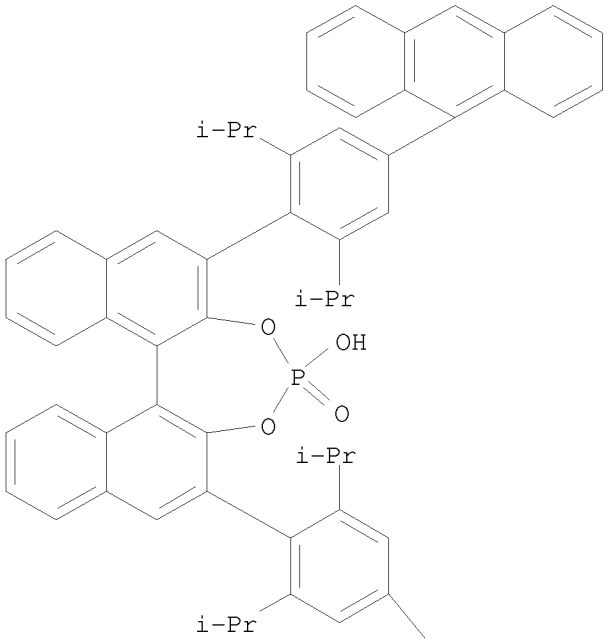

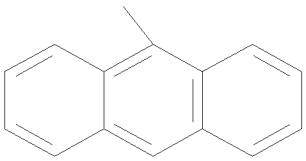

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	206.86	332.29

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-13.94

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FILE COVERS 1907 - 27 Jul 2009 VOL 151 ISS 5
FILE LAST UPDATED: 26 Jul 2009 (20090726/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

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http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

The ALL, BIB, MAX, and STD display formats in the CA/CAplus family of databases will soon be updated to include new citing references information. This enhancement may impact record import into database management software. For additional information, refer

to NEWS 22.

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L7         106 L6

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      25141116 PY<2005
L8           6 L7 AND PY<2005

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L8 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:965208 CAPLUS
DOCUMENT NUMBER: 141:411087
TITLE: Preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith
INVENTOR(S): Akiyama, Takahiko
PATENT ASSIGNEE(S): Toagosei Co., Ltd., Japan
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096753	A1	20041111	WO 2004-JP5602	20040420 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1623971	A1	20060208	EP 2004-728421	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1780810	A	20060531	CN 2004-80011149	20040420
CN 100410234	C	20080813		
US 20060276329	A1	20061207	US 2005-554369	20051025
US 7517828	B2	20090414		

PRIORITY APPLN. INFO.:	JP 2003-121706	A	20030425
	WO 2004-JP5602	W	20040420

OTHER SOURCE(S): MARPAT 141:411087
GI

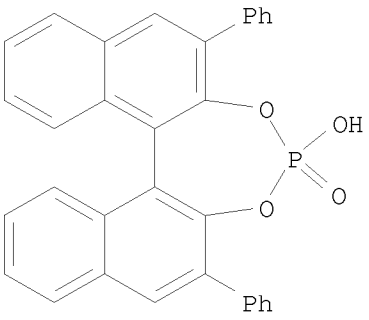
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1, R2, R3, R4 = H, halo, etc.], II [R1, R2 = H, halo, etc.] were prepared Asym. Mannich, aza-Diels-Alder reactions using Bronsted acids I, II were accomplished. For example, asym. Mannich reaction using 2-[(phenylmethylene)amino]phenol, compound III in the presence of catalyst (R)-I [R1 = R2 = 4-nitrophenyl; R3 = R4 = H] afforded compound IV in 98%

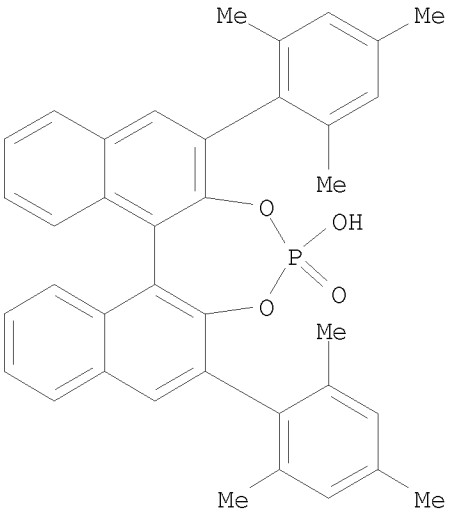
yield, 89% ee. Of note, disclosed invention provided usable compds. as an asym. synthesis catalyst which can be easily synthesized without using any metal such as a lanthanide group element; a method of asym. synthesis with the compound; and a chiral compound obtained by the asym. synthesis method.

IT 695162-86-8P 695162-87-9P 695162-88-0P
695162-89-1P 699006-54-7P 699006-55-8P
791616-56-3P 791616-57-4P 791616-59-6P
791616-61-0P 791616-62-1P 791616-63-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith)

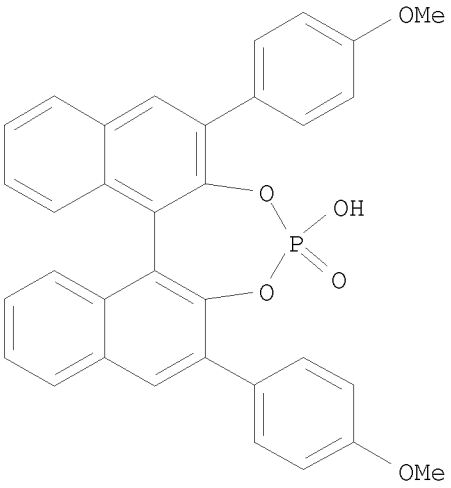
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



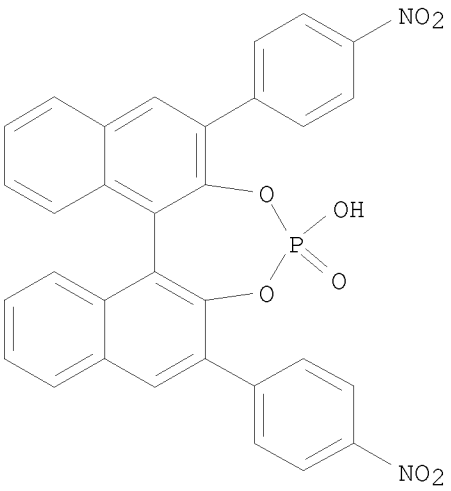
RN 695162-87-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2,4,6-trimethylphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



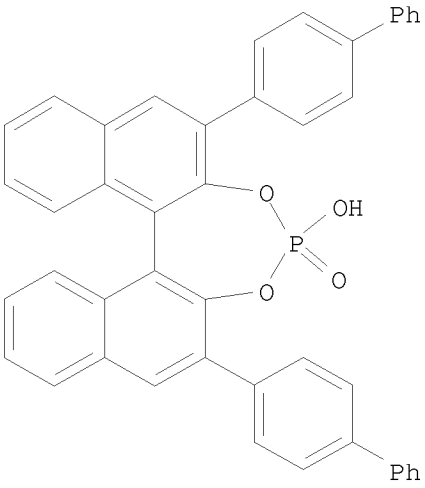
RN 695162-88-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methoxyphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-89-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)

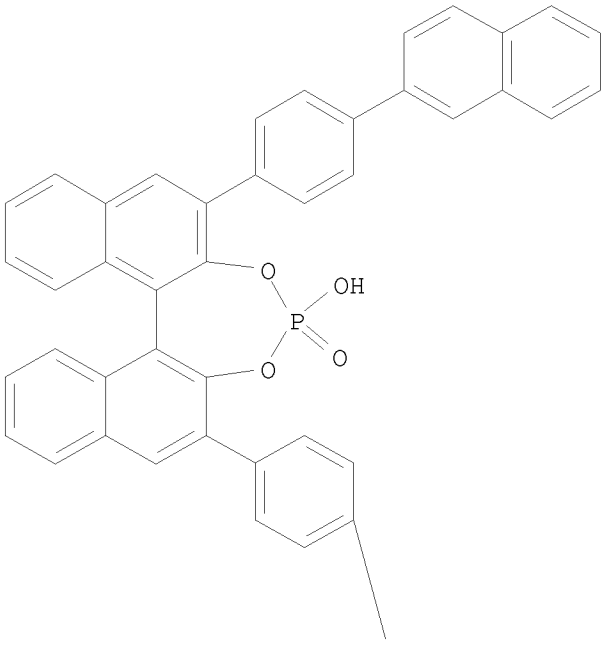


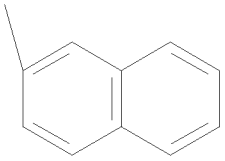
RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



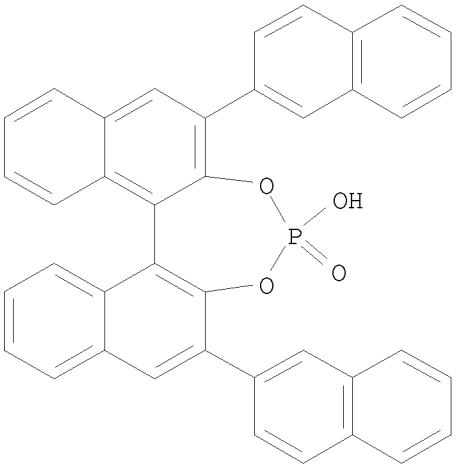
RN 699006-55-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

PAGE 1-A



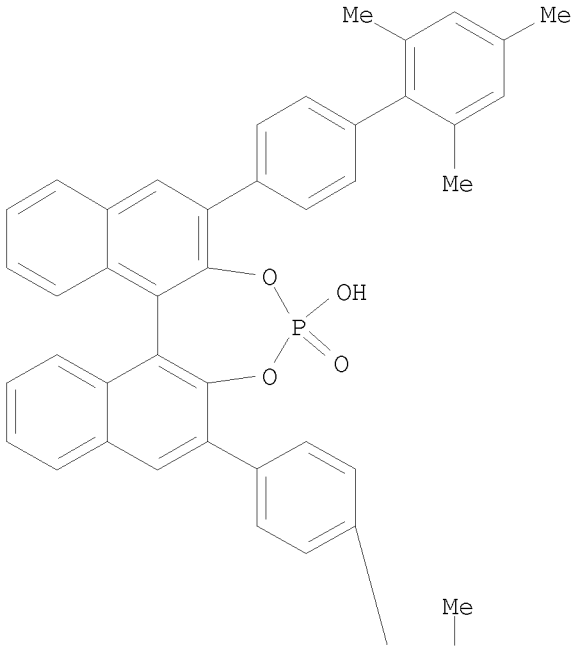


RN 791616-56-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-2-naphthalenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 791616-57-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2',4',6'-trimethyl[1,1'-biphenyl]-4-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)

PAGE 1-A



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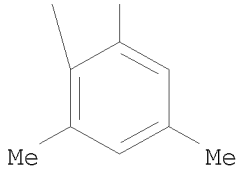

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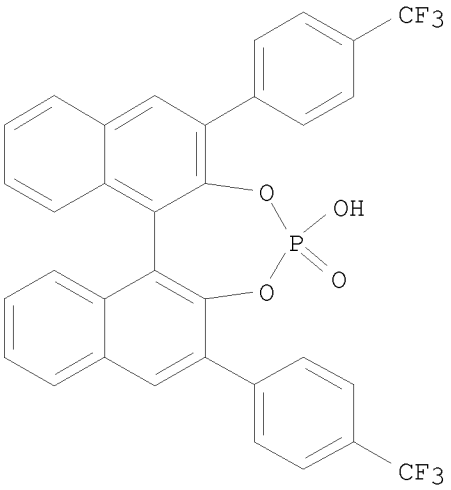
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(trifluoromethyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



RN 791616-61-0 CAPLUS
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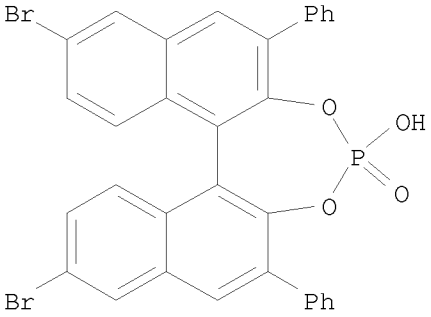
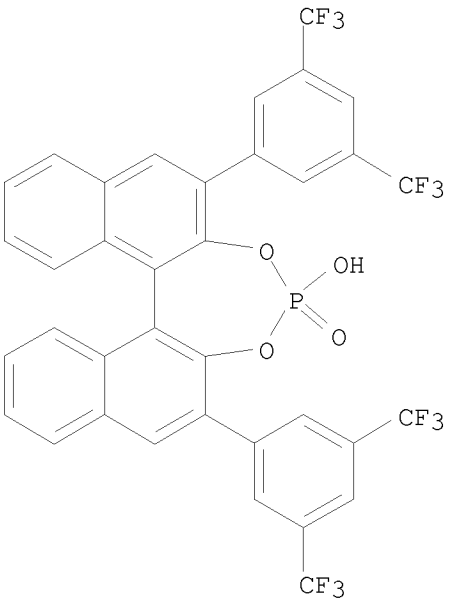
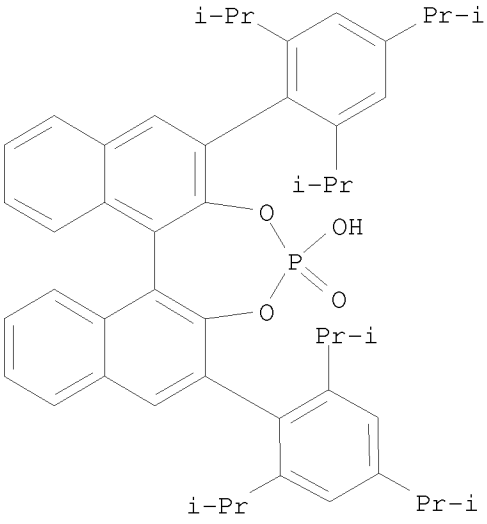


RN 791616-62-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



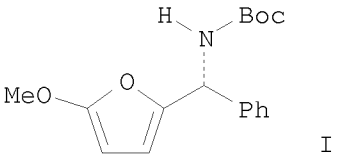
RN 791616-63-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:711178 CAPLUS
DOCUMENT NUMBER: 141:366084
TITLE: Organocatalytic Asymmetric Aza-Friedel-Crafts Alkylation of Furan
AUTHOR(S): Uraguchi, Daisuke; Sorimachi, Keiichi; Terada, Masahiro

CORPORATE SOURCE: Department of Chemistry Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
SOURCE: Journal of the American Chemical Society (2004), 126(38), 11804-11805
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:366084
GI



I

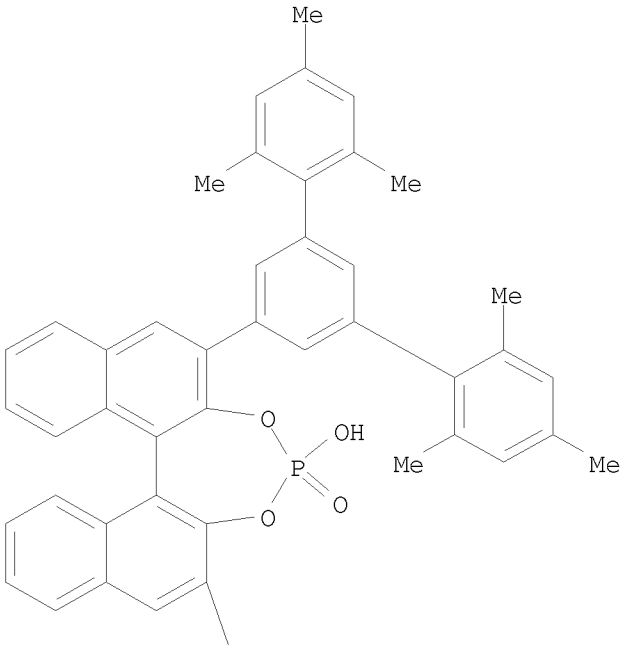
AB A new asym. entry of the 1,2-aza-Friedel-Crafts reaction, catalyzed by a chiral phosphoric acid, is described. The present reaction has provided an atom-economical route to furan-2-ylamines, e.g., I, in a highly enantioselective fashion. The synthetic utility of these products was displayed by oxidative cleavage of the furan ring (aza-Achmatowicz reaction) to form a 1,4-dicarbonyl compound that could be further derivatized to a chiral γ-butenolide.

IT 780780-94-1P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective preparation of (aminomethyl)furans via stereoselective binol-phosphoric acid-catalyzed aza-Friedel-Crafts alkylation of methoxyfuran with N-Boc aldimines)

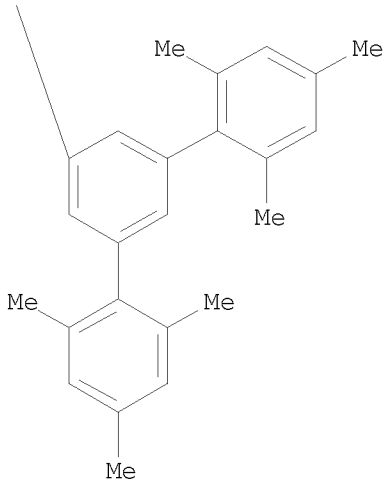
RN 780780-94-1 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(2,2'',4,4'',6,6''-hexamethyl[1,1':3',1''-terphenyl]-5'-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)

PAGE 1-A



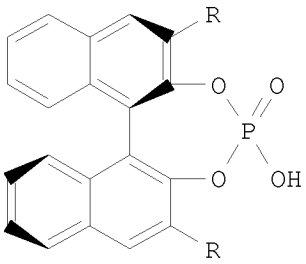
PAGE 2-A



OS.CITING REF COUNT: 134 THERE ARE 134 CAPLUS RECORDS THAT CITE THIS RECORD (140 CITINGS)
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

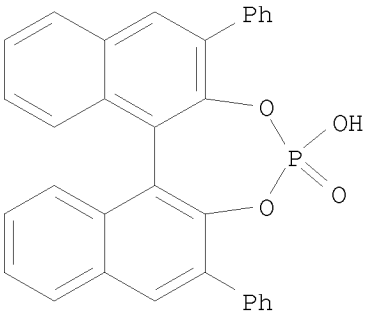
L8 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:290782 CAPLUS
DOCUMENT NUMBER: 141:23867
TITLE: Chiral Bronsted Acid-Catalyzed Direct Mannich Reactions via Electrophilic Activation
AUTHOR(S): Uraguchi, Daisuke; Terada, Masahiro
CORPORATE SOURCE: Graduate School of Science, Department of Chemistry,

Tohoku University, Sendai, 980-8578, Japan
SOURCE: Journal of the American Chemical Society (2004), 126(17), 5356-5357
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:23867
GI



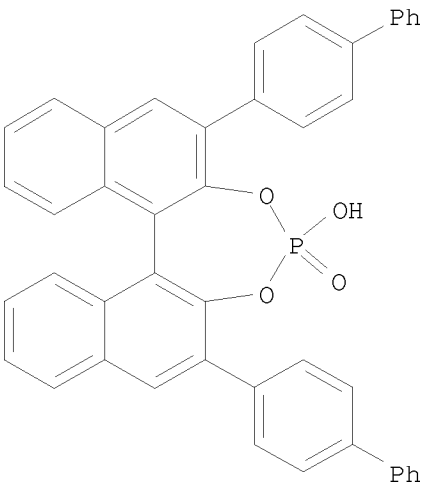
I

AB Binaphthyl phosphoric acids I [R = H, Ph, C6H4Ph-4, 4-(β-naphthyl)phenyl] serve as highly effective catalysts for the direct addition of acetyl acetone to N-Boc-protected arylimines, R1CH:NBoc (R1 = Ph, C6H4OMe-4, C6H4Me-4, C6H4Br-4, C6H4F-4, C6H4Me-2, 1-naphthyl), to afford β-amino-α-acetoxyketones R1CH(NHBoc)CH(COMe)2 in enantiomeric excess. The 3,3'-bisaryl substituents in I have pos. effects on the enantioselectivity of the catalysts, such that I [R = 4-(β-naphthyl)phenyl] was found to be an excellent catalyst. For example, in the Mannich reaction between PhCH:NBoc and acetyl acetone, the above catalyst enabled the formation of BocNHCH(Ph)CH(COMe)2 in 99% yield with 95% enantiomeric excess. The stereochem. course of this reaction was established through the synthesis of (S)-BocNHCH(Ph)CO2Me. The transformation thus demonstrated is applicable to a useful method for the synthesis of various phenylglycine derivs.
IT 695162-86-8 699006-54-7
RL: CAT (Catalyst use); USES (Uses)
(chiral binaphthyl phosphoric acids as Bronsted acid catalysts for asym. Mannich reactions of Boc-protected arylimines)
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX

NAME)

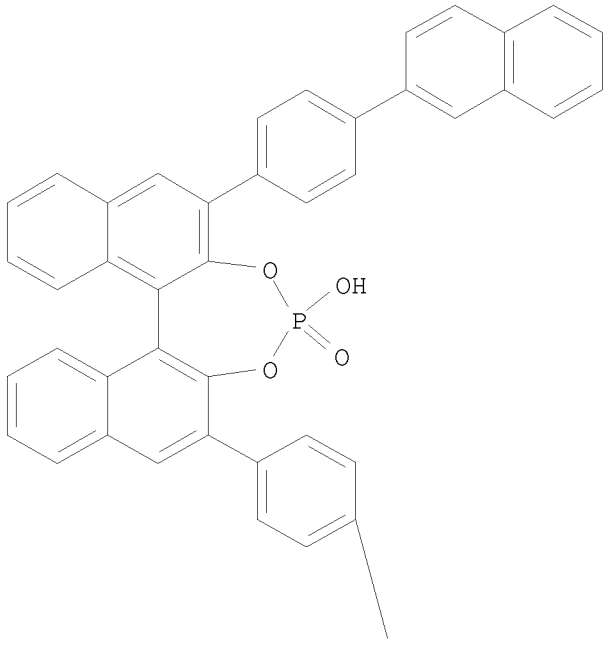


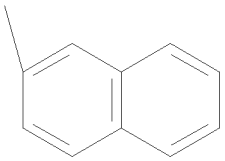
IT 699006-55-8P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral binaphthyl phosphoric acids as Bronsted acid catalysts for asym. Mannich reactions of Boc-protected arylimines)

RN 699006-55-8 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

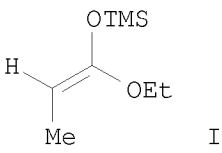
PAGE 1-A



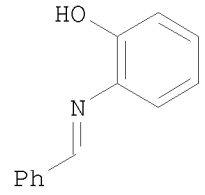


OS.CITING REF COUNT: 253 THERE ARE 253 CAPLUS RECORDS THAT CITE THIS RECORD (270 CITINGS)
REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

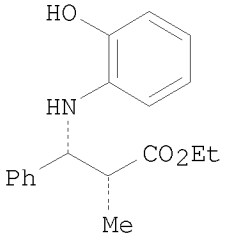
L8 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:279336 CAPLUS
DOCUMENT NUMBER: 141:6902
TITLE: Enantioselective Mannich-type reaction catalyzed by a chiral Bronsted acid
AUTHOR(S): Akiyama, Takahiko; Itoh, Junji; Yokota, Koji; Fuchibe, Kohei
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Gakushuin University, Toshima-ku, Tokyo, 171-8588, Japan
SOURCE: Angewandte Chemie, International Edition (2004), 43(12), 1566-1568
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:6902
GI



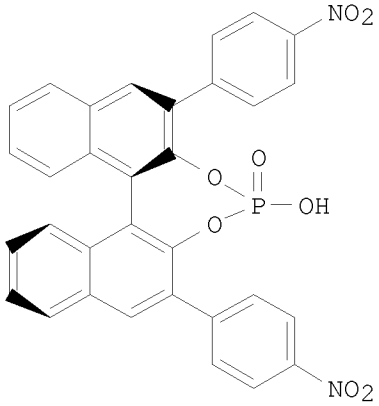
I



II



III



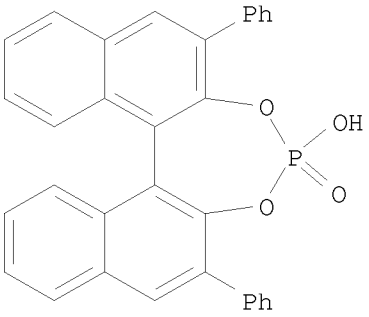
IV

AB The Mannich-type reaction of ketene silyl acetals, e.g., I, with

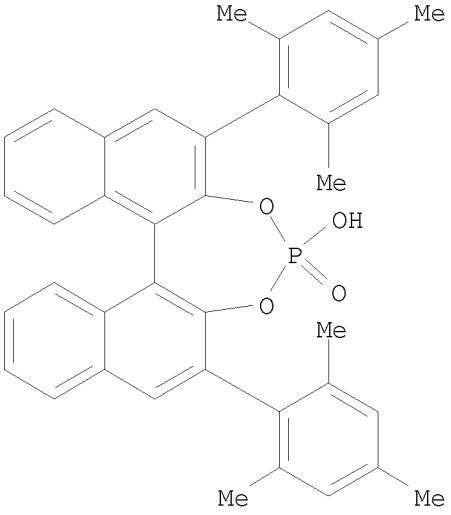
aldimines, e.g., II, proceeded highly enantioselectively to afford the syn isomer of β amino esters, e.g., III, with up to 96% ee under the influence of a chiral Bronsted acid IV derived from (R)-BINOL.

IT 695162-86-8 695162-87-9 695162-88-0
695162-89-1
RL: CAT (Catalyst use); USES (Uses)
(stereoselective preparation of aminoesters via chiral Bronsted acid catalyzed Mannich-type reaction of aldimines with ketene silyl acetals under metal-free conditions)

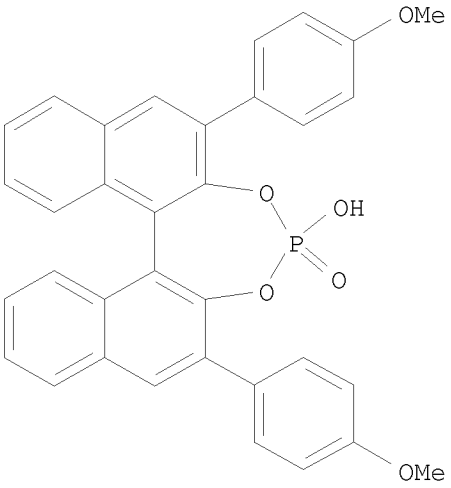
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



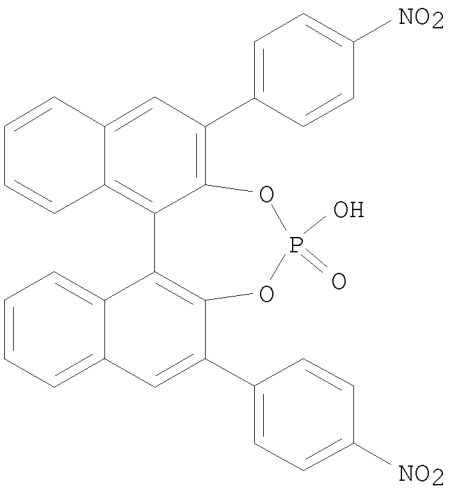
RN 695162-87-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2,4,6-trimethylphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-88-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methoxyphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-89-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 264 THERE ARE 264 CAPLUS RECORDS THAT CITE THIS RECORD (271 CITINGS)
REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

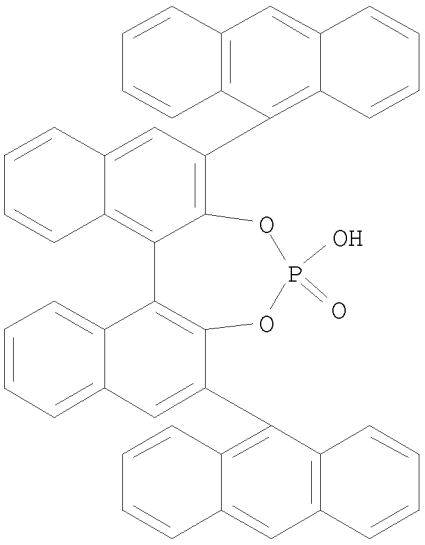
L8 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:691761 CAPLUS
DOCUMENT NUMBER: 135:257051
TITLE: Optically active phosphate derivative and its use
INVENTOR(S): Inanaga, Junji
PATENT ASSIGNEE(S): Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1134209	A1	20010919	EP 2001-105920	20010309 <--
EP 1134209	B1	20030827		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 20010031887	A1	20011018	US 2001-801041	20010308 <--
US 6391926	B2	20020521		
JP 2001328995	A	20011127	JP 2001-68370	20010312 <--
PRIORITY APPLN. INFO.:			JP 2000-73997 A	20000313

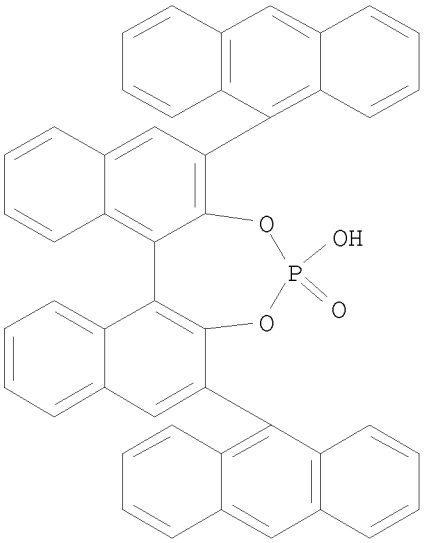
AB The present invention includes optically active binaphthol derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'diol (I), optically active phosphate derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'-diyl phosphonic acid (II), processes for their production, and a chiral shift reagent comprising the derivative of II. Thus, (R)-I (preparation and spectral data given) was treated with phosphorous oxychloride and hydrolyzed to give (R)-II (70%), the efficacy of which as an asymmetry identifying agent, when subjected to (±)-1-phenylethyl alc., (±)-1-phenyl-1-methoxy acetic acid, (±)-2-octanol, (±)-2-butanol, and (±)-phenylmethyl sulfoxide, was measured by NMR.

IT 361342-51-0P 361342-52-1P
RL: ARG (Analytical reagent use); IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and use as chiral shift reagent on racemic compds.)

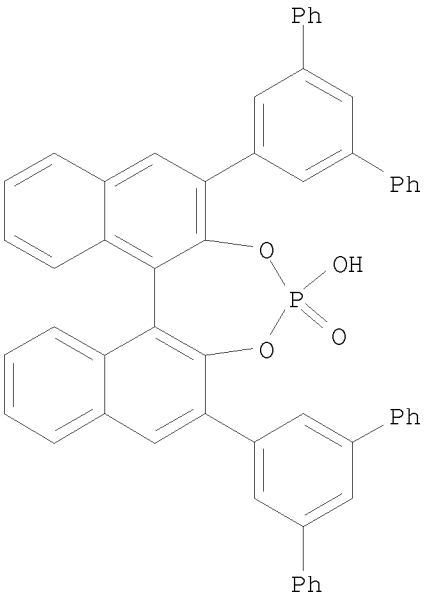
RN 361342-51-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 361342-52-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bS)- (CA INDEX NAME)



IT 361342-55-4
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(use as chiral shift reagent on racemic compds.)
RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

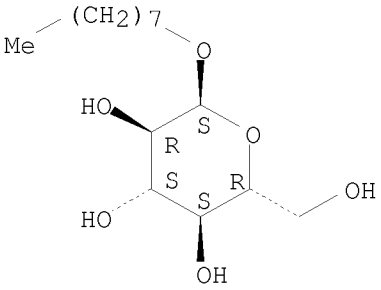
L8 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:502876 CAPLUS

DOCUMENT NUMBER: 133:238193
TITLE: Dendritic, 1,1'-binaphthalene-derived cleft-type receptors (Dendroclefts) for the molecular recognition of pyranosides
AUTHOR(S): Bahr, Anja; Felber, Beatrice; Schneider, Katharina; Diederich, Francois
CORPORATE SOURCE: Laboratorium fur Organische Chemie, Eidgenossische Technische Hochschule, ETH-Zentrum, Zurich, CH-8092, Switz.
SOURCE: Helvetica Chimica Acta (2000), 83(7), 1346-1376
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:238193
AB Two series of optically active, cleft-type dendritic receptors (dendroclefts) for carbohydrate recognition were prepared by attaching Frechet-type dendrons via ethynediyl linkers to a core consisting of one or two 1,1'-binaphthalene-2,2'-diyl phosphate moieties. Sugar substrates were expected to bind via bidentate ionic H-bonding of two OH groups to the phosphodiester core and, addnl., to undergo van der Waals and CH.tplbond.π interactions with the aromatic rings of the surrounding dendritic wedges. The synthesis of the dendritic receptors with a single binaphthalene core started from 3,3'-diethynylated MOM-protected (MOM = methoxymethyl) 1,1'-binaphthalene-2,2'-diol to which the Frechet-type dendrons of generations were attached via Sonogashira cross-coupling. MOM-Ether deprotection followed by phosphodiester formation and ion exchange provided the targeted receptors. 1H-NMR Complexation studies with the dendritic receptors containing one binaphthalene core and octyl glycosides 53-55 in CD3CN and CDCl3 revealed that ionic H-bonding between the phosphodiester core in the dendritic receptors and the sugar OH groups provides the major driving force for stoichiometric 1:1 host-guest association A smaller, yet significant contribution to the binding free enthalpy was also provided by interactions between the sugar guests and the dendritic wedges. Binding selectivity was weak in all cases, and only small changes in association strength were observed as a function of dendritic generation. In studies with the dendritic receptors, which contain two binaphthalene moieties at the core, higher-order complex stoichiometries prevented the determination of quant. binding data. As a result of unfavorable steric interactions between the dendritic wedges, these flexible receptor systems apparently avoid adopting the "syn"-conformation with convergent phosphodiester sites that is required for efficient 1:1 host-guest complexation.
IT 293727-18-1P 293727-19-2P 293727-20-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(dendritic binaphthalene-derived cleft-type receptors dendroclefts for the mol. recognition of pyranosides)
RN 293727-18-1 CAPLUS
CN α-D-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29781-80-4
CMF C14 H28 O6

Absolute stereochemistry. Rotation (+).



CM 2

CRN 293726-77-9
CMF C60 H44 O8 P . C16 H36 N

CM 3

CRN 293726-76-8
CMF C60 H44 O8 P

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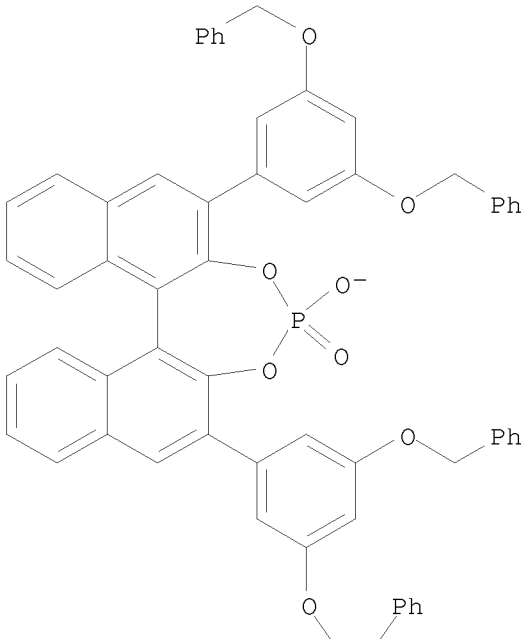
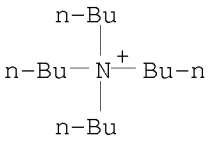


PAGE 2-A

CM 4

CRN 10549-76-5
CMF C16 H36 N

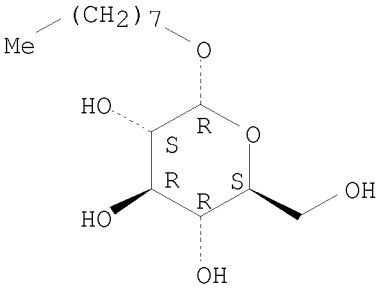


RN 293727-19-2 CAPLUS
CN α-L-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 142925-45-9
CMF C14 H28 O6

Absolute stereochemistry.



CM 2

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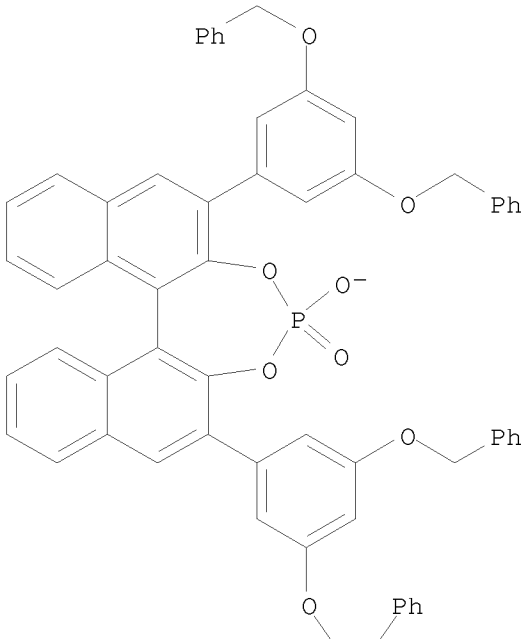
CMF C60 H44 O8 P . C16 H36 N

CM 3

CRN 293726-76-8
CMF C60 H44 O8 P

PAGE 1-A



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CRN 10549-76-5
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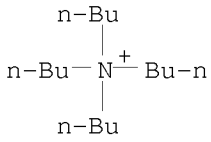
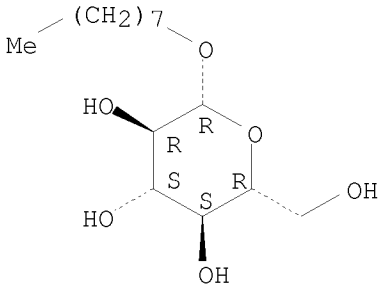


RN 293727-20-5 CAPLUS
CN β-D-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 29836-26-8
CMF C14 H28 O6

Absolute stereochemistry. Rotation (-).



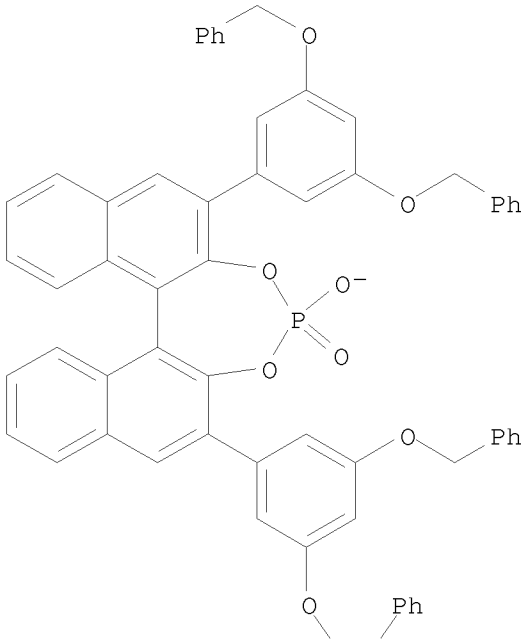
CM 2

CRN 293726-77-9
CMF C60 H44 O8 P . C16 H36 N

CM 3

CRN 293726-76-8
CMF C60 H44 O8 P

PAGE 1-A



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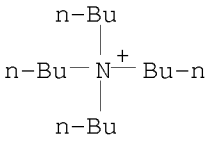
CRN 10549-76-5

CMF C16 H36 N

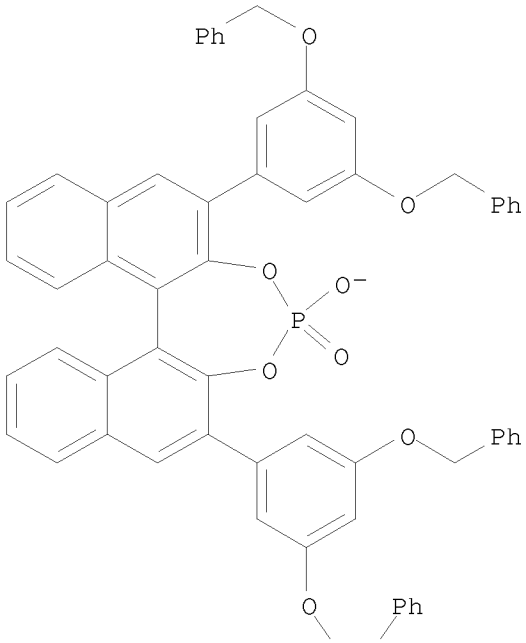


IT 293726-77-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dendritic binaphthalene-derived cleft-type receptors dendroclefts for the mol. recognition of pyranosides)
RN 293726-77-9 CAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 293726-76-8
CMF C60 H44 O8 P

PAGE 1-A



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CM 2

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     CMF  C16 H36 N
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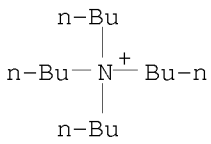


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      26320997 PY<2006
L9          13 L7 AND PY<2006

=> d l9 1-13 ibib abs hitstr

L9   ANSWER 1 OF 13  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        2005:1305115  CAPLUS
DOCUMENT NUMBER:         144:191901
TITLE:                   A powerful Bronsted acid catalyst for the
                         organocatalytic asymmetric transfer hydrogenation of
                         imines
AUTHOR(S):               Hoffmann, Sebastian; Seayad, Abdul Majeed; List,
                         Benjamin
CORPORATE SOURCE:        Max-Planck-Institut fuer Kohlenforschung, Muelheim an
                         der Ruhr, 45470, Germany
SOURCE:                  Angewandte Chemie, International Edition (2005
                         ), 44(45), 7424-7427
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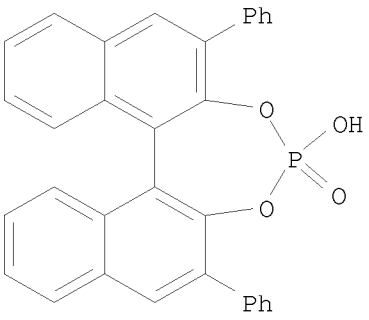
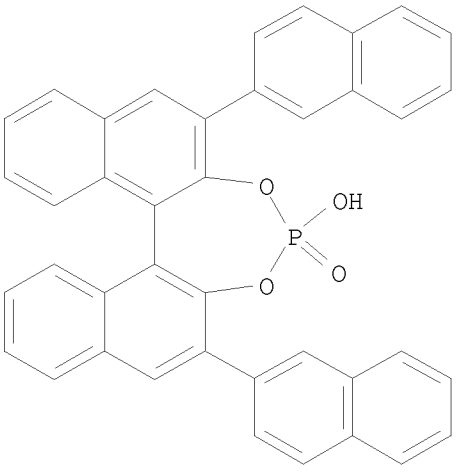
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:191901
AB A 1 mol% loading of a chiral binaphthalene phosphoric acid catalyst converts aromatic and aliphatic imines into the amines in high yields and enantioselectivities if treated with Hantzsch dihydropyridine.
IT 874948-59-1 874948-60-4 874948-61-5
874948-62-6 874948-63-7
RL: CAT (Catalyst use); USES (Uses)
(Bronsted acid catalyst for the asym. transfer hydrogenation of imines)

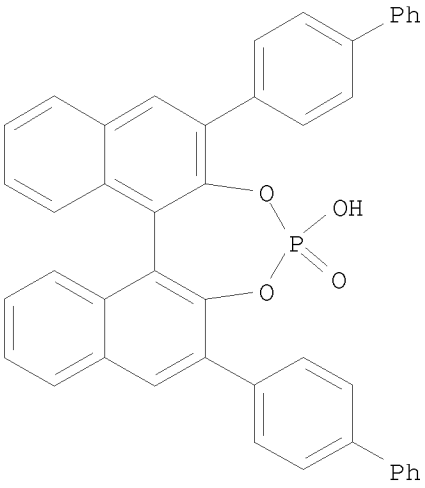
RN 874948-59-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bS)- (CA INDEX NAME)



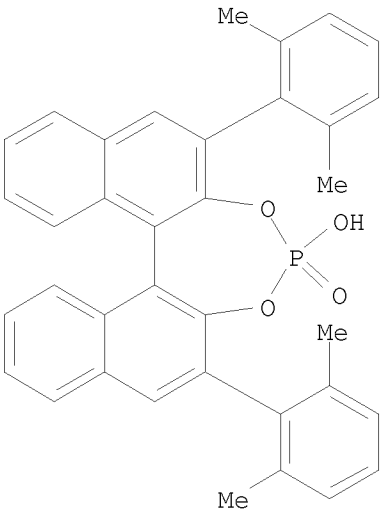
RN 874948-60-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-2-naphthalenyl-, 4-oxide, (11bS)- (CA INDEX NAME)



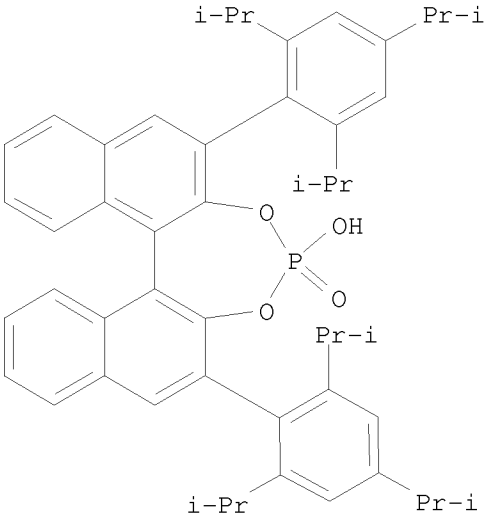
RN 874948-61-5 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bS)- (CA INDEX NAME)



RN 874948-62-6 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(2,6-dimethylphenyl)-4-hydroxy-, 4-oxide, (11bS)- (9CI) (CA INDEX NAME)



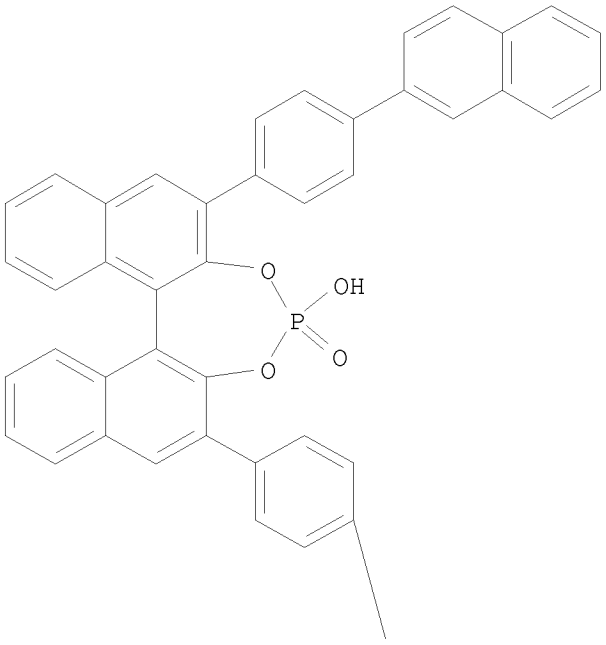
RN 874948-63-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide, (11bS)- (CA INDEX NAME)



OS.CITING REF COUNT: 139 THERE ARE 139 CAPLUS RECORDS THAT CITE THIS RECORD (144 CITINGS)
REFERENCE COUNT: 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1126940 CAPLUS
DOCUMENT NUMBER: 144:51263
TITLE: Bronsted acid-catalyzed imine amidation
AUTHOR(S): Rowland, Gerald B.; Zhang, Haile; Rowland, Emily B.; Chennamadhavuni, Spandan; Wang, Yong; Antilla, Jon C.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of Mississippi, University, MS, 38677, USA
SOURCE: Journal of the American Chemical Society (2005), 127(45), 15696-15697
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:51263
AB A method for the Bronsted acid-catalyzed addition of amide nucleophiles to imines to produce protected aminal products is described. Simple Bronsted acids (Ph phosphinic acid and trifluoromethanesulfonimide) were shown to be excellent catalysts, providing high yields of the aminal product. A catalytic asym. imine amidation using sulfonamides as nucleophiles was successful when a hindered biaryl phosphoric acid catalyst derived from 2,2'-diphenyl-[3,3'-biphenanthrene]-4,4'-diol (VAPOL) was used. Excellent yields and enantioselectivities were found in these addns.
IT 871130-15-3 871130-16-4
RL: CAT (Catalyst use); USES (Uses)
(stereoselective preparation of N-Boc aminals via Bronsted acid-catalyzed asym. amidation of N-Boc imines with amide derivs.)
RN 871130-15-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bS)- (CA INDEX NAME)

PAGE 1-A



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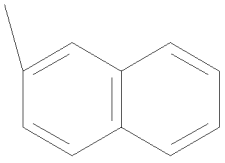
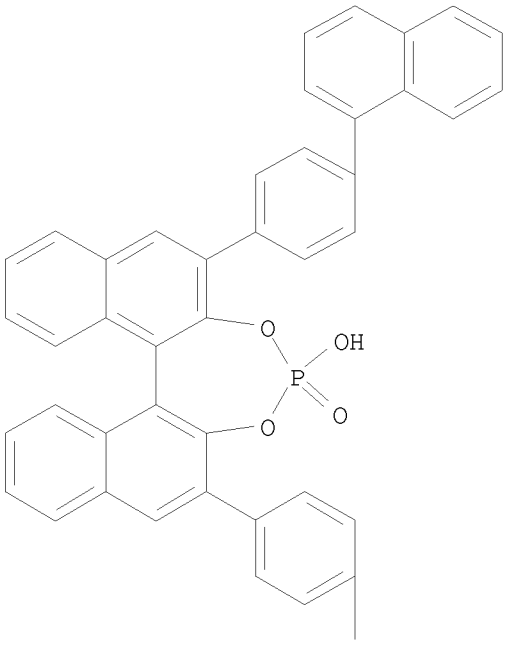


RN 871130-16-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(1-naphthalenyl)phenyl]-, 4-oxide, (11bS)- (9CI) (CA INDEX NAME)

PAGE 1-A



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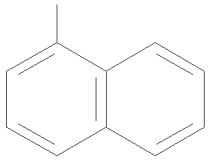

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REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:821039 CAPLUS
DOCUMENT NUMBER: 143:367008
TITLE: Iodomethylzinc phosphates: powerful reagents for the cyclopropanation of alkenes
AUTHOR(S): Lacasse, Marie-Christine; Poulard, Cyril; Charette, Andre B.
CORPORATE SOURCE: Departement de Chimie, Universite de Montreal, Montreal, QC, H3C 3J7, Can.
SOURCE: Journal of the American Chemical Society (2005), 127(36), 12440-12441
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:367008
AB A new family of zinc carbenoids derived from phosphoric acids was developed and used in the cyclopropanation of allylic alcs. and ethers and

also of unfunctionalized olefins. The use of the chiral phosphoric acid of a 3,3'-disubstituted BINOL led to efficient stereocontrol, affording the cyclopropanes of allylic and homoallylic ethers with complete conversions and high ee. A catalytic version of this reaction using 10 mol% of the chiral phosphate reagent was also developed.

IT 699006-55-8P
RL: CAT (Catalyst use); RGT (Reagent); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(stereoselective preparation of substituted cyclopropanes via DME-assisted bis(naphthalenylphenyl)BINOL phosphate-zinc catalyzed asym. cyclopropanation of olefins with diiodomethane)

RN 699006-55-8 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

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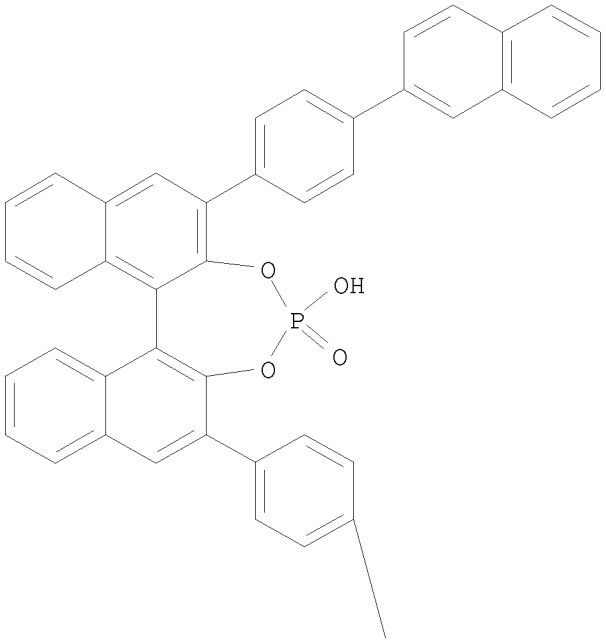

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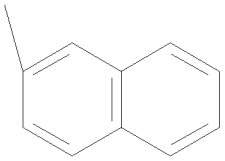

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REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2005:696866 CAPLUS

DOCUMENT NUMBER: 143:193554
TITLE: Process for production of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles using chiral phosphoric acid derivative
INVENTOR(S): Terada, Masahiro; Uraguchi, Daisuke; Sorimachi, Keiichi; Shimizu, Hideo
PATENT ASSIGNEE(S): Takasago International Corporation, Japan
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2005070875	A1	20050804	WO 2005-JP962		20050126 <--
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US 20070142639	A1	20070621	US 2006-587279		20061012
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			WO 2005-JP962	W	20050126

OTHER SOURCE(S): MARPAT 143:193554
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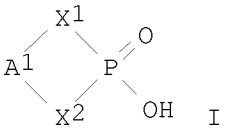

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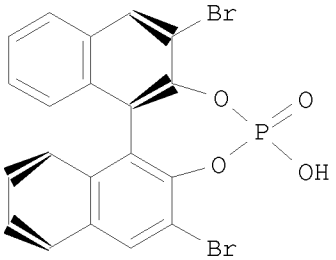


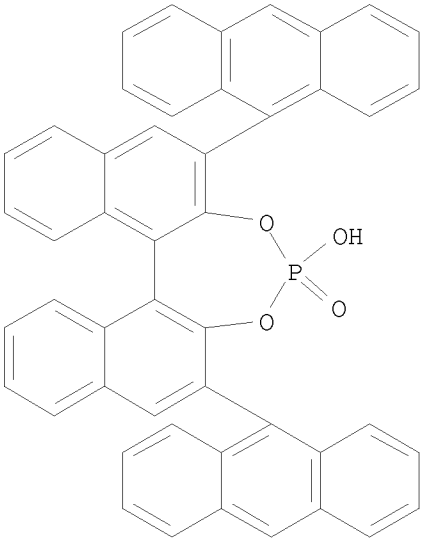
II

AB A process for the production of amines comprises reacting an imine with a nucleophilic compound (except trialkylsilyl vinyl ethers) in the presence of a phosphoric acid derivative represented by the general formula (I) (wherein A1 = a spacer; X1, X2 = independently a divalent nonmetal atom or divalent nonmetal atomic group; Y1 = O, S). The invention provides a process by which amines (particularly optically active amines) useful as intermediates of drugs, agricultural chems., or the like can be produced without special post-treatment in high yield at high optical purity; and phosphoric acid derivs. (particularly optically active phosphoric acid derivs.) useful in the production of the amines. Thus, 0.11 mmol acetylacetone was added to a solution of 0.002 phosphoric acid derivative (II) and 0.1 mmol PhCH:NCOPh in

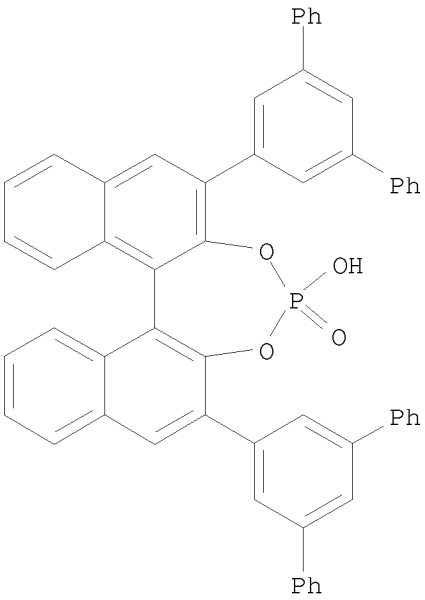
μL CDCl3 under N and stirred for 5.5 h to give 99% optically active PHCH(NHPh)CH(COMe)2 (61% optical yield).

IT 361342-51-0 361342-55-4 695162-86-8
695162-88-0 695162-89-1 699006-54-7
791616-56-3 791616-59-6 791616-62-1
861909-29-7 861909-30-0 861909-31-1
861909-39-9 861909-40-2 861909-41-3
861909-43-5 861909-53-7 861909-54-8
861909-55-9
RL: CAT (Catalyst use); USES (Uses)
(preparation of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles in presence of chiral phosphoric acid derivative)

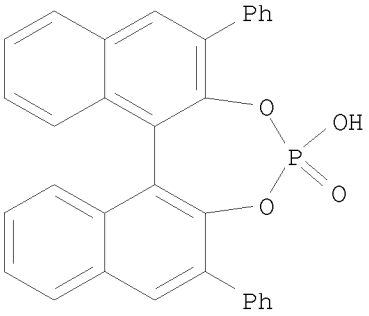
RN 361342-51-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



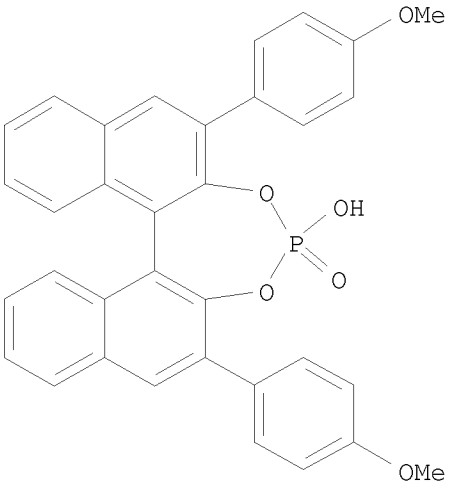
RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



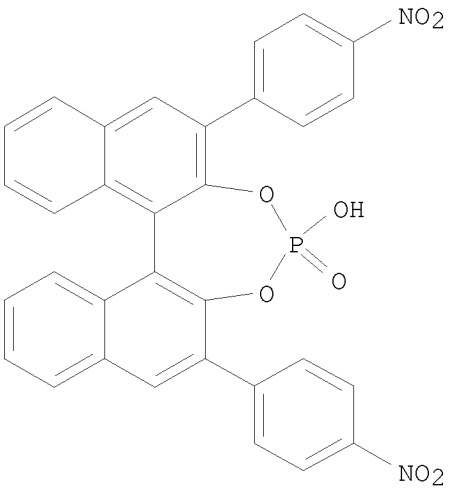
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



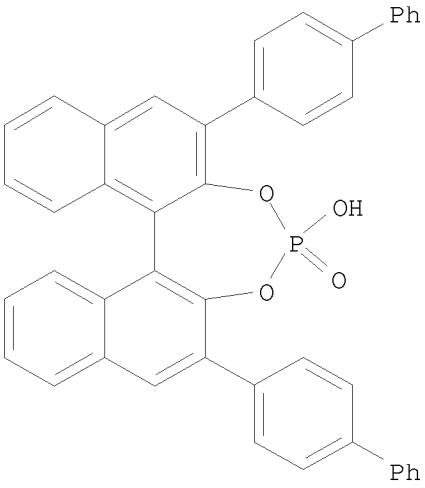
RN 695162-88-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methoxyphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



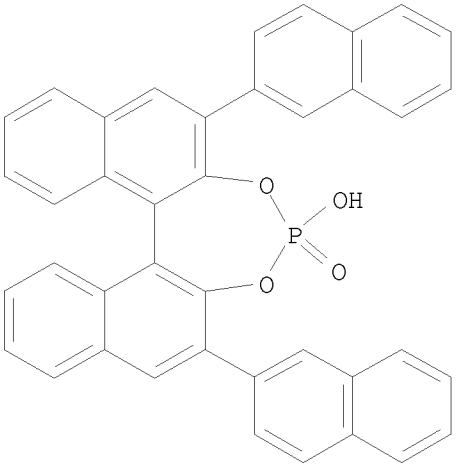
RN 695162-89-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



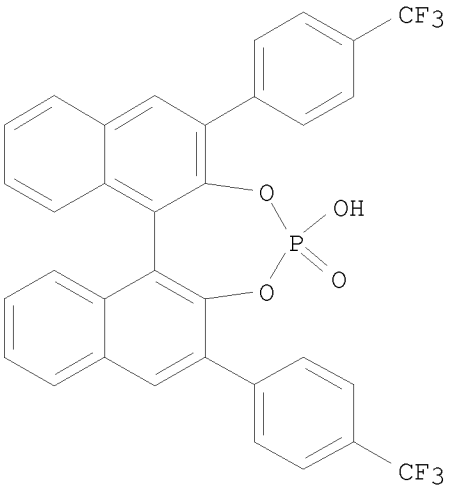
RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



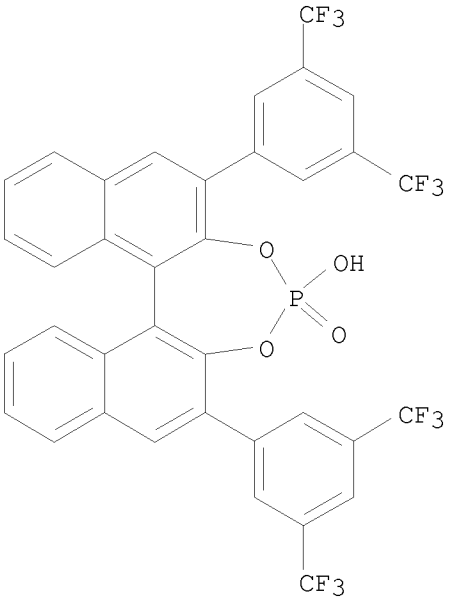
RN 791616-56-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-2-naphthalenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



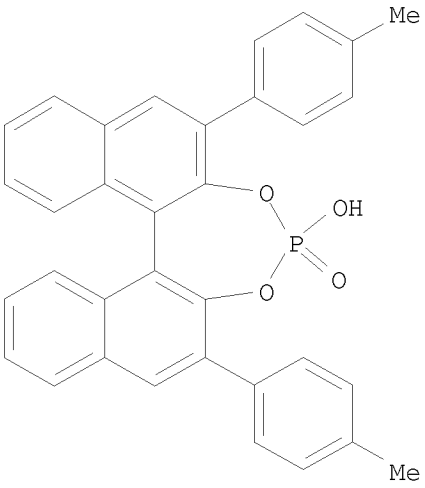
RN 791616-59-6 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(trifluoromethyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



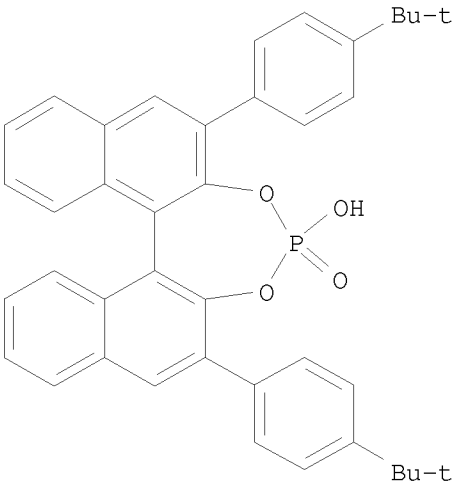
RN 791616-62-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



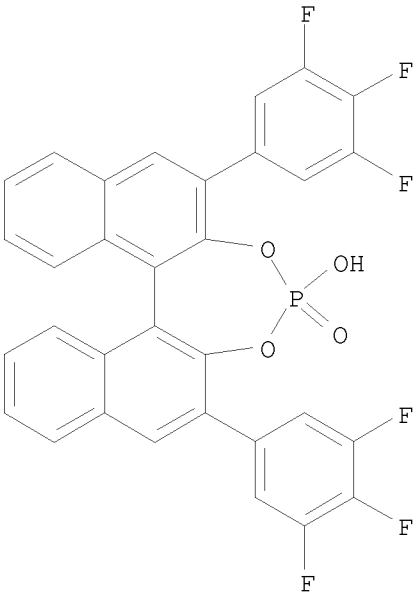
RN 861909-29-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methylphenyl)-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



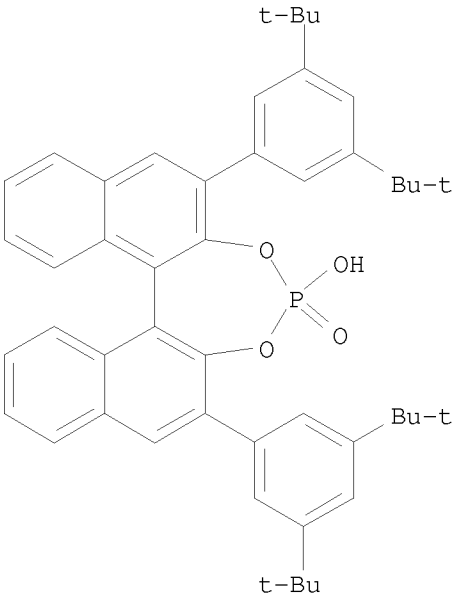
RN 861909-30-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[4-(1,1-dimethylethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



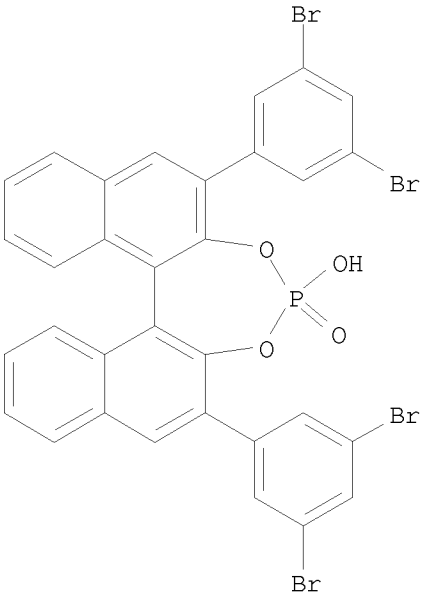
RN 861909-31-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(3,4,5-trifluorophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



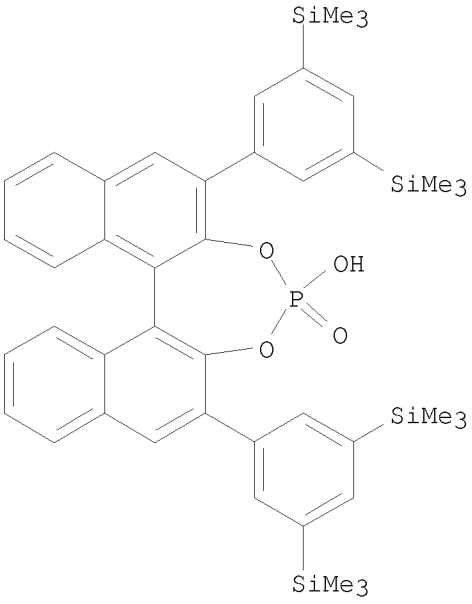
RN 861909-39-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(1,1-dimethylethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



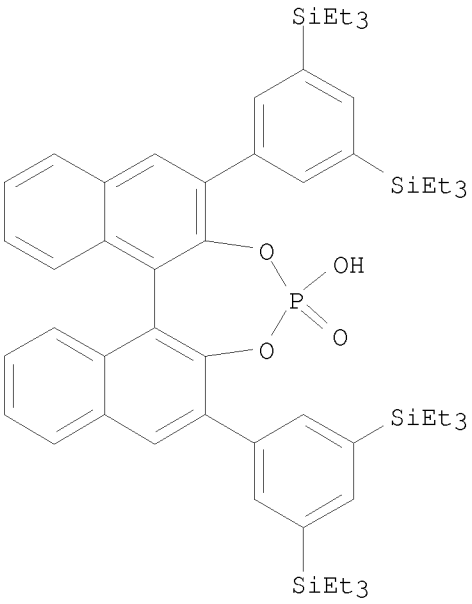
RN 861909-40-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(3,5-dibromophenyl)-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



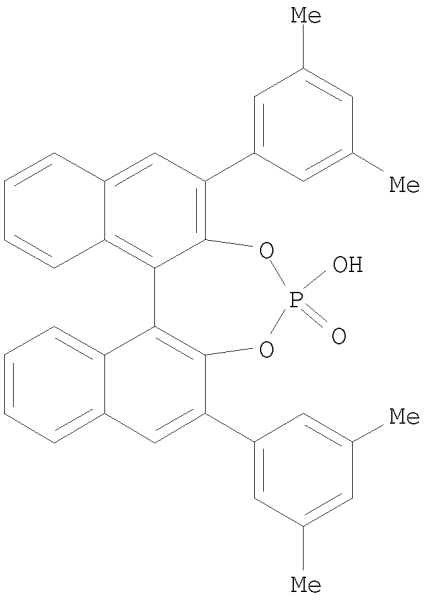
RN 861909-41-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trimethylsilyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



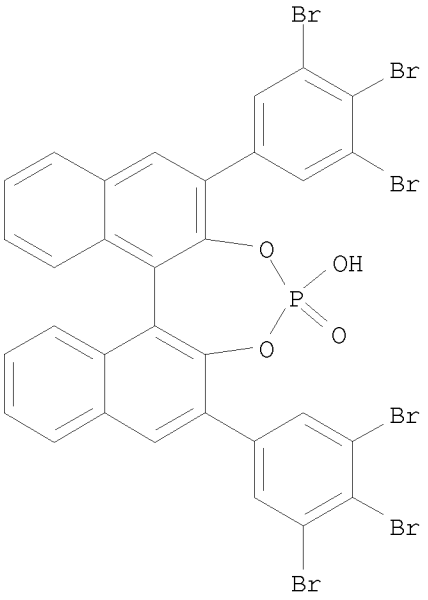
RN 861909-43-5 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(triethylsilyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



RN 861909-53-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(3,5-dimethylphenyl)-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



RN 861909-54-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(3,4,5-tribromophenyl)-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



RN 861909-55-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(3,5-di-9-anthracenylphenyl)-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

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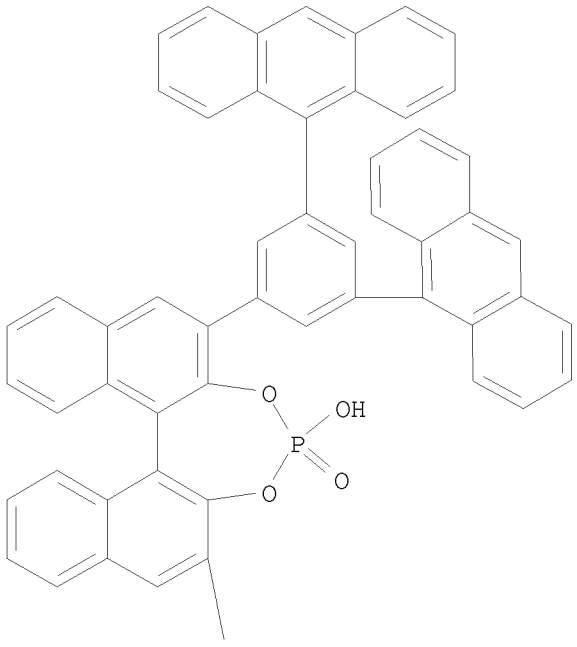

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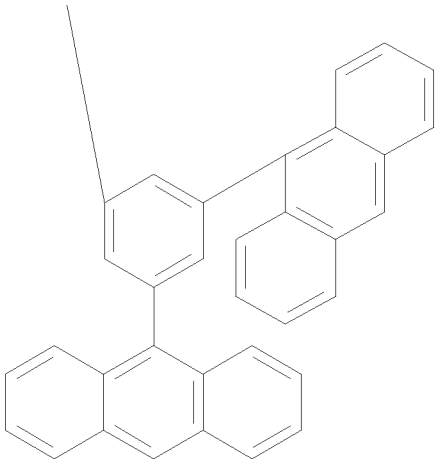

IT 699006-55-8P 861909-45-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles in presence of chiral phosphoric acid derivative)
RN 699006-55-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

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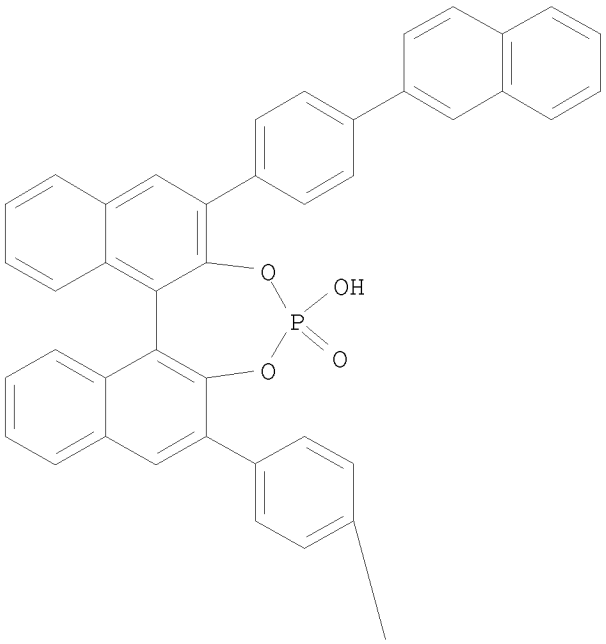
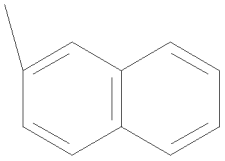


PAGE 2-A



RN 861909-45-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(methylsulfonyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

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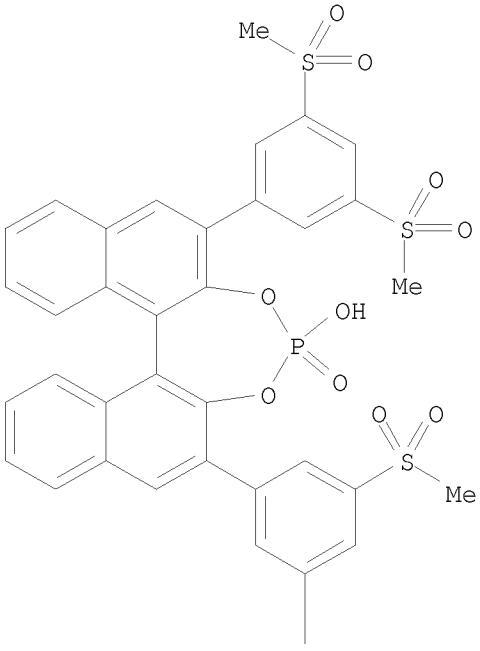
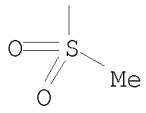


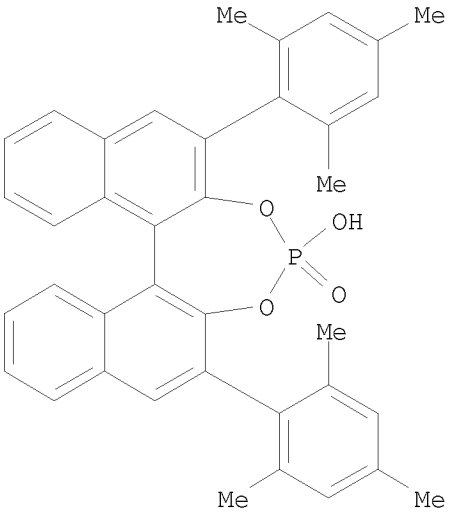
PAGE 2-A



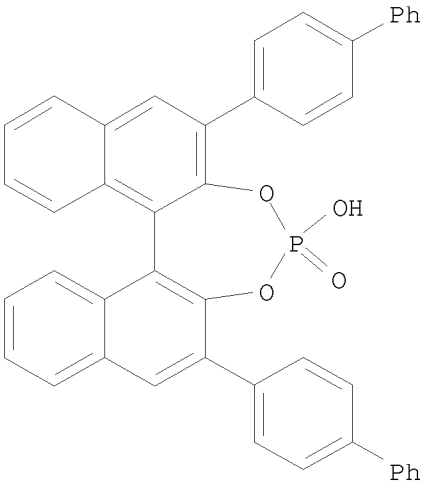
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:648594 CAPLUS
DOCUMENT NUMBER: 143:305975
TITLE: Enantioselective Bronsted Acid Catalyzed Transfer Hydrogenation: Organocatalytic Reduction of Imines

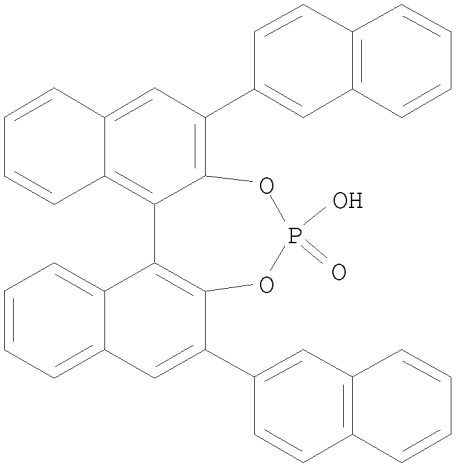
AUTHOR(S): Rueping, Magnus; Sugiono, Erli; Azap, Cengiz; Theissmann, Thomas; Bolte, Michael
CORPORATE SOURCE: Degussa Endowed Professorship, Institute of Chemistry and Chemical Biology, Johann-Wolfgang Goethe University Frankfurt am Main, Frankfurt, D-60439, Germany
SOURCE: Organic Letters (2005), 7(17), 3781-3783
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:305975
AB The first enantioselective Bronsted acid catalyzed reduction of imines R1CMe:NR2 (R1 = Ph, 2-FC6H4, 4-F3CC6H4, 2-naphthyl, etc.; R2 = Ph, 4-MeOC6H4) to the corresponding chiral amines using Hantzsch dihydropyridine as the hydrogen source has been developed. The stereochem. of the chiral amines can be rationalized by a stereochem. model derived from an X-ray crystal structure of a chiral BINOL phosphate catalyst.
IT 695162-87-9 699006-54-7 791616-56-3
791616-62-1 864943-22-6 864943-23-7
RL: CAT (Catalyst use); USES (Uses)
(asym. synthesis of secondary aryl(α-methylbenzyl) amines via enantioselective transfer hydrogenation of ketimines with Hantzsch dihydropyridine catalyzed by chiral BINOL phosphate as Bronsted acid)
RN 695162-87-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2,4,6-trimethylphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



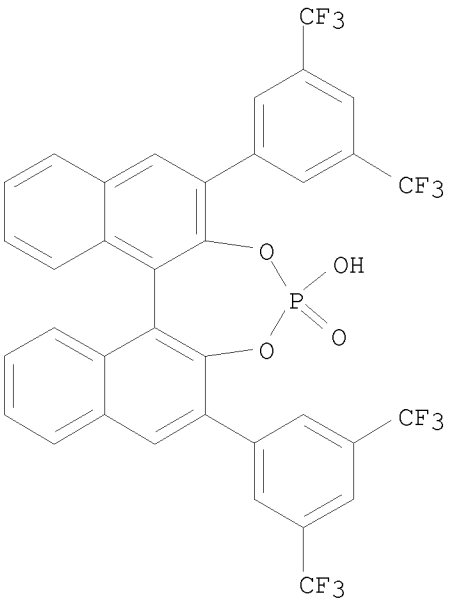
RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 791616-56-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-2-naphthalenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 791616-62-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 864943-22-6 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-9-phenanthrenyl-, 4-oxide, (11bR)- (CA INDEX NAME)

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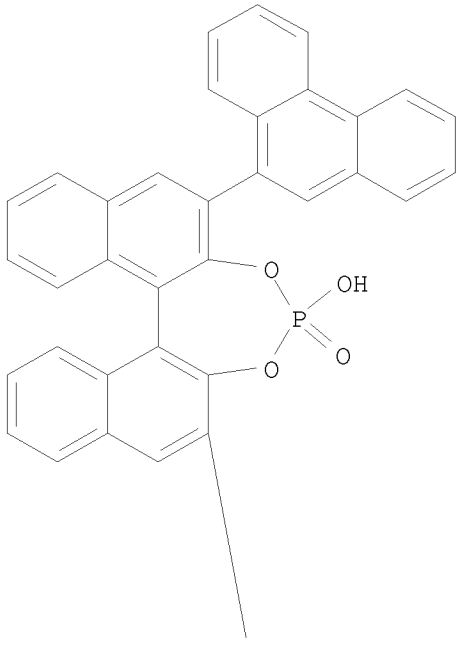
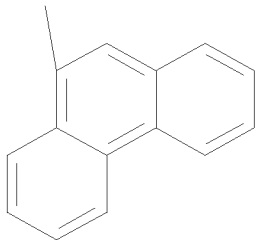
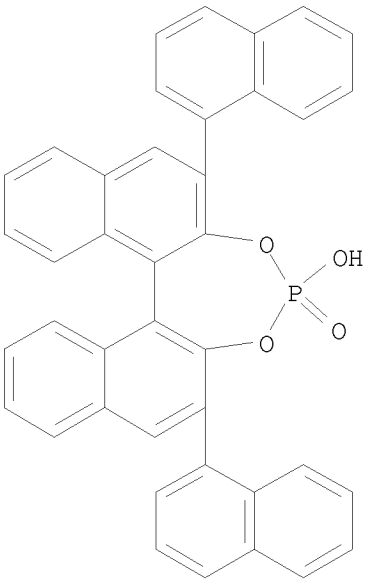




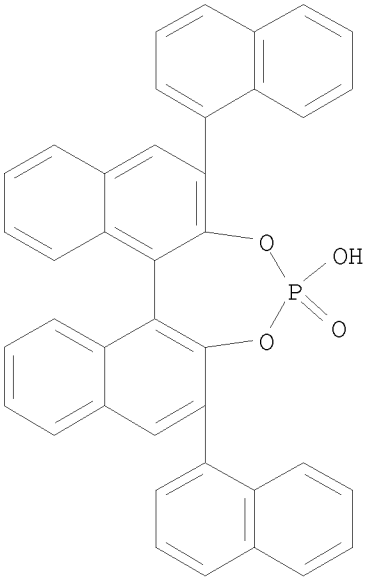
RN 864943-23-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-1-naphthalenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



IT 864943-24-8
RL: PRP (Properties)
(crystal structure; asym. synthesis of secondary aryl(α-methylbenzyl) amines via enantioselective transfer hydrogenation of ketimines with Hantzsch dihydropyridine catalyzed by chiral BINOL phosphate as Bronsted acid)
RN 864943-24-8 CAPLUS
CN Methanol, compd. with (11bR)-4-hydroxy-2,6-di-1-naphthalenyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (3:1), monohydrate (9CI) (CA INDEX NAME)

CM 1

CRN 864943-23-7
CMF C40 H25 O4 P



CM 2

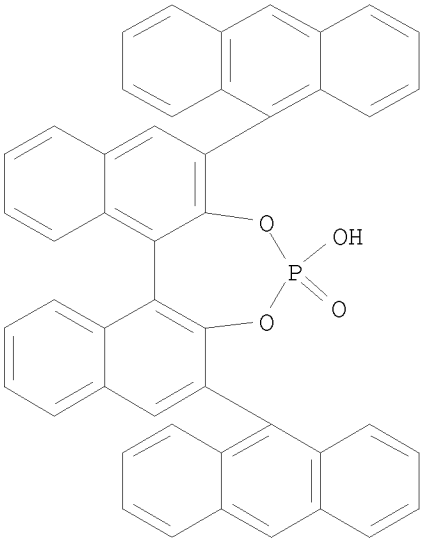
CRN 67-56-1
CMF C H4 O

$H_3C—OH$

OS.CITING REF COUNT: 151 THERE ARE 151 CAPLUS RECORDS THAT CITE THIS RECORD (154 CITINGS)
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:485703 CAPLUS
DOCUMENT NUMBER: 143:172605
TITLE: Organocatalytic Asymmetric Direct Alkylation of α-Diazoester via C-H Bond Cleavage
AUTHOR(S): Uraguchi, Daisuke; Sorimachi, Keiichi; Terada, Masahiro
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
SOURCE: Journal of the American Chemical Society (2005), 127(26), 9360-9361
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:172605
AB A new variant of phosphoric acid-catalyzed C-C bond forming reaction, direct alkylation of α-diazo ester, via C-H bond cleavage is presented. The resulting products, β-amino-α-diazo esters, are highly functionalized and useful synthetic precursors for various types of β-amino acids.
IT 361342-51-0
RL: CAT (Catalyst use); USES (Uses)
(organocatalytic asym. direct alkylation of α-diazo ester via C-H

bond cleavage)
RN 361342-51-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



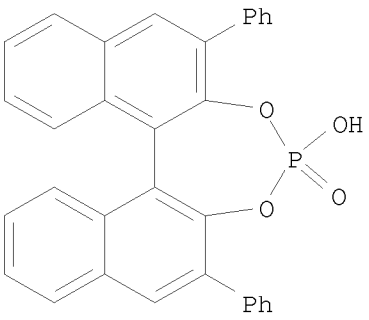
OS.CITING REF COUNT: 75 THERE ARE 75 CAPLUS RECORDS THAT CITE THIS RECORD (77 CITINGS)
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:466276 CAPLUS
DOCUMENT NUMBER: 143:133445
TITLE: Chiral bronsted acid catalyzed enantioselective hydrophosphonylation of imines: asymmetric synthesis of α-amino phosphonates
AUTHOR(S): Akiyama, Takahiko; Morita, Hisashi; Itoh, Junji; Fuchibe, Kohei
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo, 171-8588, Japan
SOURCE: Organic Letters (2005), 7(13), 2583-2585
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:133445
AB Asym. synthesis of chiral α-amino phosphonates was achieved by hydrophosphonylation of aldimines catalyzed by a chiral Bronsted acid cyclic phosphoric (R)-BINOL derivative (R)-3,3'-Ar2-1,1'-Binaphthalene-2,2'-diyl hydrophosphates [1a-d, Ar = Ph, 4-NO2C6H4, 4-CF3C6H4, 3,5-(CF3)2C6H3] were used as catalysts for asym. hydrophosphonylation of aldimines RCH:NC6H4X-4 by hydrophosphonates HPO(OR1)2, affording (R)-RCH(HNC6H4-X-4)PO(OR1)2 (3, 4; R = Ph, 2-MeC6H4, 2-NO2C6H4, PhCH:CH, 4-MeC6H4CH:CH, 4-ClC6H4CH:CH, 2-MeC6H4CH:CH, 2-ClC6H4CH:CH, 2-NO2C6H4CH:CH, 2-CF3C6H4CH:CH, 1-naphthyl-CH:CH; R1 = Et, iPr; X = MeO, H, OH) with enbantioselectivity up to 90%. The reaction mechanism is discussed.
IT 695162-86-8 695162-89-1 791616-59-6
RL: CAT (Catalyst use); USES (Uses)

(preparation of chiral α-amino phosphonates by asym. hydrophosphonylation of aldimines catalyzed by (R)-BINOL cyclic hydrophosphate Bronsted acid)

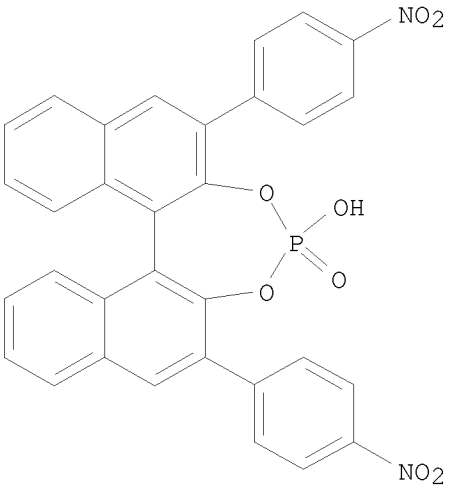
RN 695162-86-8 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



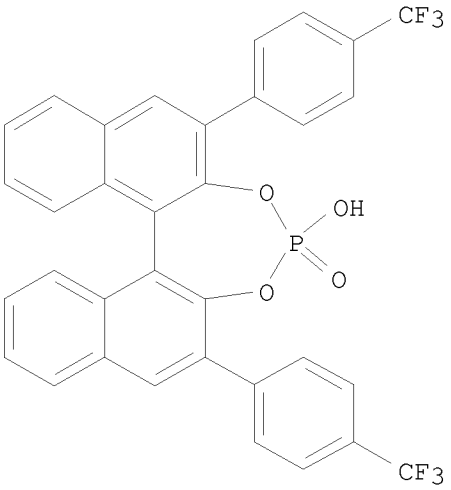
RN 695162-89-1 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)

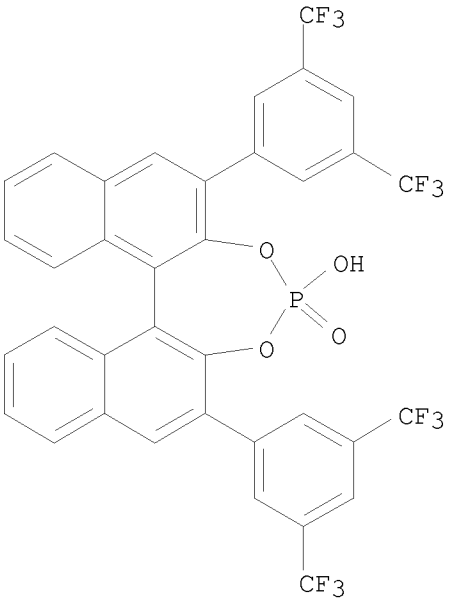


RN 791616-59-6 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(trifluoromethyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



IT 791616-62-1P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of chiral α-amino phosphonates by asym. hydrophosphonylation of aldimines catalyzed by (R)-BINOL cyclic hydrophosphate Bronsted acid)
RN 791616-62-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 99 THERE ARE 99 CAPLUS RECORDS THAT CITE THIS RECORD (105 CITINGS)
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:965208 CAPLUS

DOCUMENT NUMBER: 141:411087
TITLE: Preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith
INVENTOR(S): Akiyama, Takahiko
PATENT ASSIGNEE(S): Toagosei Co., Ltd., Japan
SOURCE: PCT Int. Appl., 103 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096753	A1	20041111	WO 2004-JP5602	20040420 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1623971	A1	20060208	EP 2004-728421	20040420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1780810	A	20060531	CN 2004-80011149	20040420
CN 100410234	C	20080813		
US 20060276329	A1	20061207	US 2005-554369	20051025
US 7517828	B2	20090414		

PRIORITY APPLN. INFO.: JP 2003-121706 A 20030425
WO 2004-JP5602 W 20040420
OTHER SOURCE(S): MARPAT 141:411087
GI

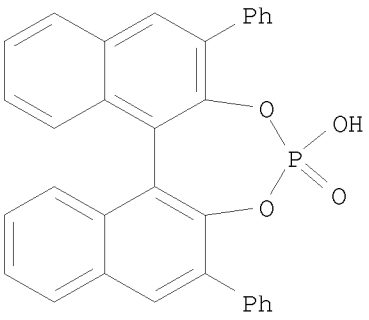
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [R1, R2, R3, R4 = H, halo, etc.], II [R1, R2 = H, halo, etc.] were prepared Asym. Mannich, aza-Diels-Alder reactions using Bronsted acids I, II were accomplished. For example, asym. Mannich reaction using 2-[(phenylmethylene)amino]phenol, compound III in the presence of catalyst (R)-I [R1 = R2 = 4-nitrophenyl; R3 = R4 = H] afforded compound IV in 98% yield, 89% ee. Of note, disclosed invention provided usable compds. as an asym. synthesis catalyst which can be easily synthesized without using any metal such as a lanthanide group element; a method of asym. synthesis with the compound; and a chiral compound obtained by the asym. synthesis method.

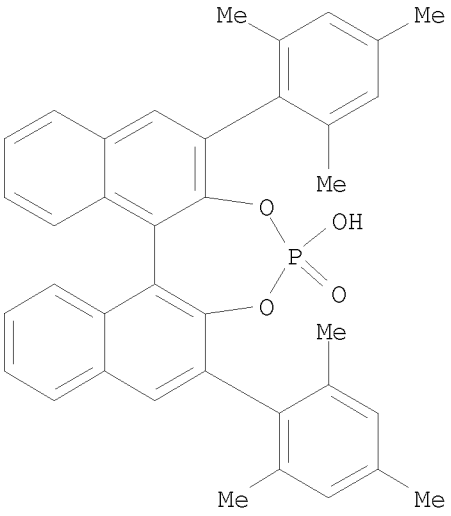
IT 695162-86-8P 695162-87-9P 695162-88-0P
695162-89-1P 699006-54-7P 699006-55-8P
791616-56-3P 791616-57-4P 791616-59-6P
791616-61-0P 791616-62-1P 791616-63-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of chiral Bronsted catalysts in asym. synthesis and asym. Mannich, aza-Diels-Alder reaction, hydrophosphorylation therewith)

RN 695162-86-8 CAPLUS

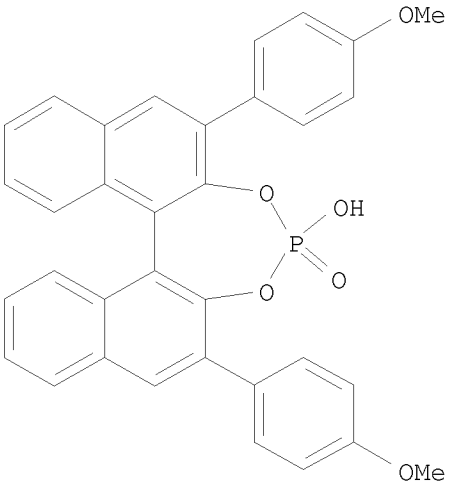
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



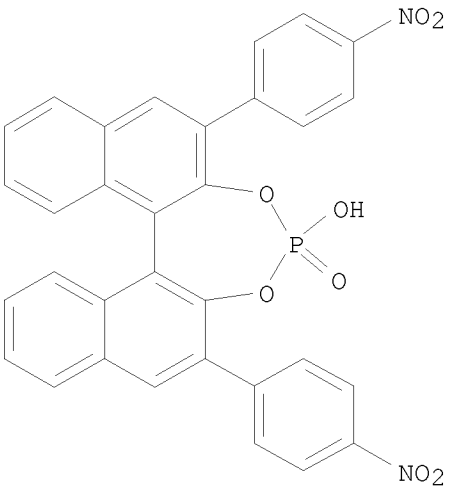
RN 695162-87-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2,4,6-trimethylphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



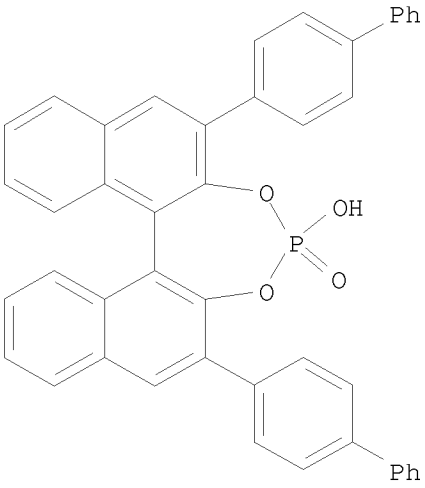
RN 695162-88-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methoxyphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-89-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)

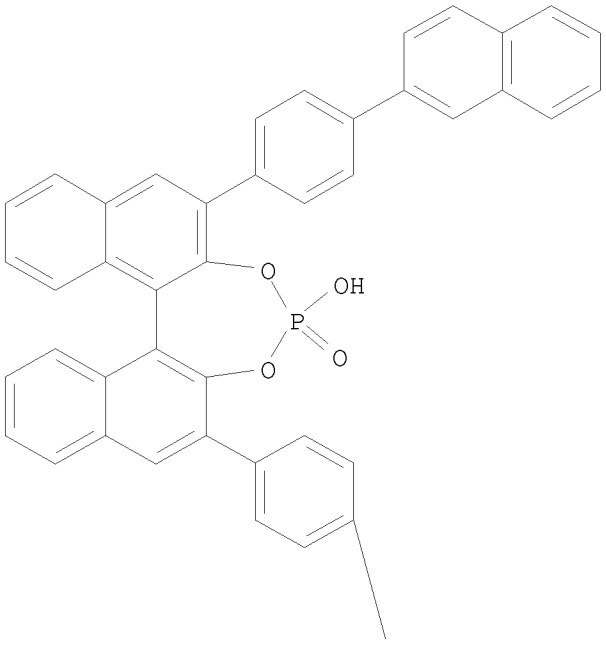


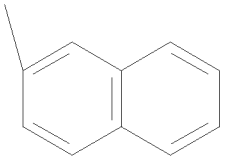
RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



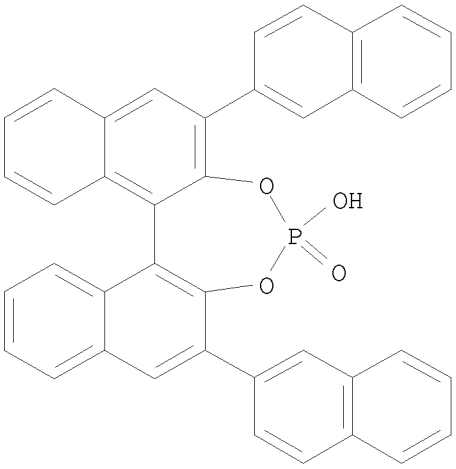
RN 699006-55-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

PAGE 1-A



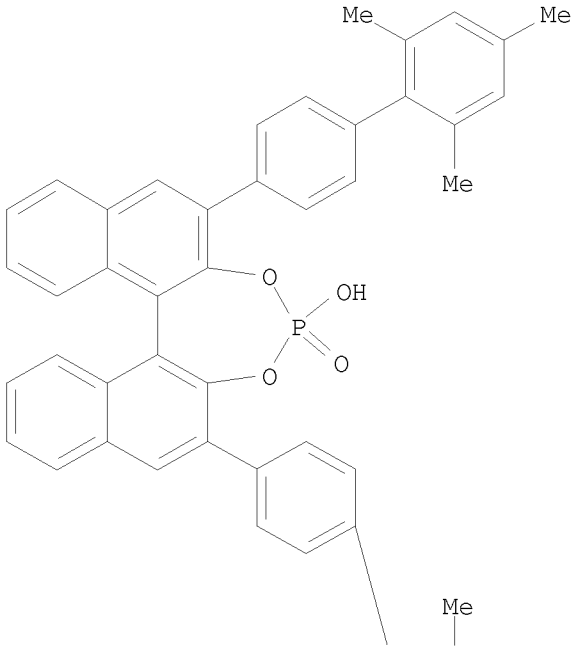


RN 791616-56-3 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-di-2-naphthalenyl-, 4-oxide, (11bR)- (CA INDEX NAME)

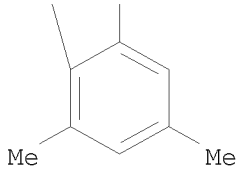


RN 791616-57-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2',4',6'-trimethyl[1,1'-biphenyl]-4-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)

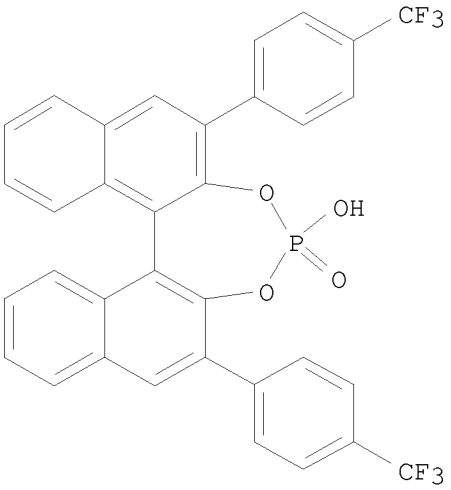
PAGE 1-A



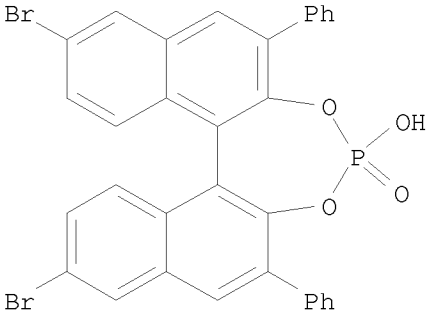
PAGE 2-A



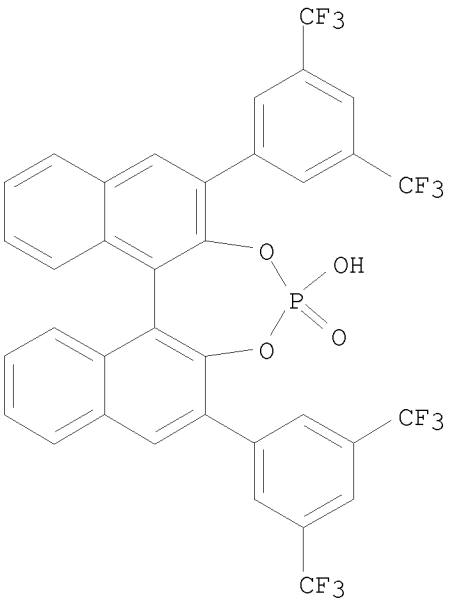
RN 791616-59-6 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(trifluoromethyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



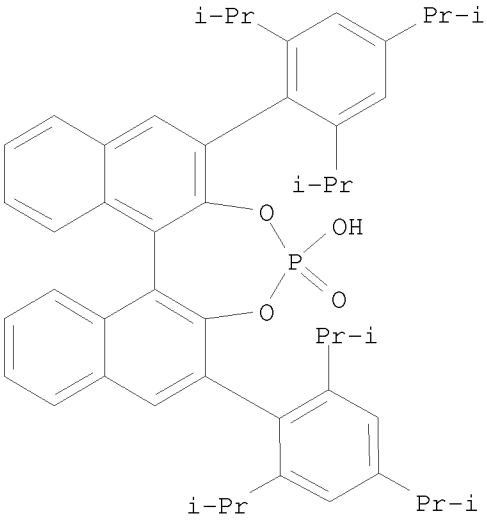
RN 791616-61-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 9,14-dibromo-4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)



RN 791616-62-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



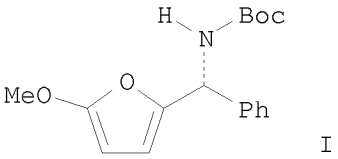
RN 791616-63-2 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[2,4,6-tris(1-methylethyl)phenyl]-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:711178 CAPLUS
DOCUMENT NUMBER: 141:366084
TITLE: Organocatalytic Asymmetric Aza-Friedel-Crafts Alkylation of Furan
AUTHOR(S): Uraguchi, Daisuke; Sorimachi, Keiichi; Terada, Masahiro

CORPORATE SOURCE: Department of Chemistry Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
SOURCE: Journal of the American Chemical Society (2004), 126(38), 11804-11805
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:366084
GI



I

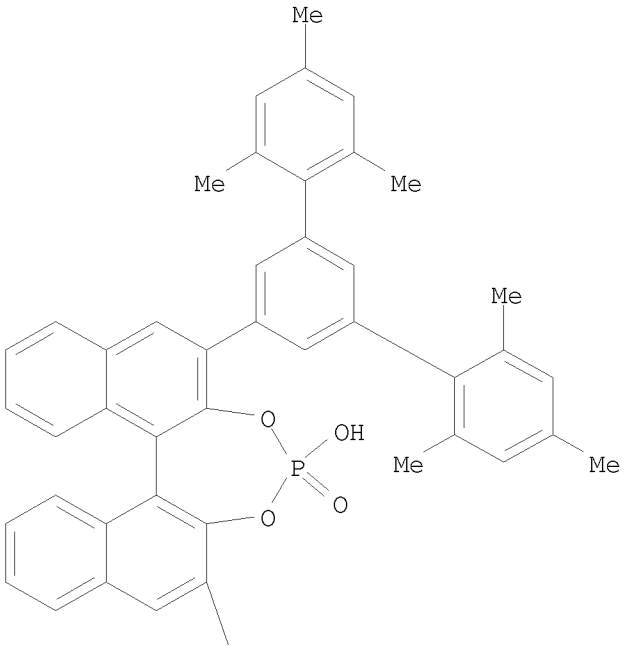
AB A new asym. entry of the 1,2-aza-Friedel-Crafts reaction, catalyzed by a chiral phosphoric acid, is described. The present reaction has provided an atom-economical route to furan-2-ylamines, e.g., I, in a highly enantioselective fashion. The synthetic utility of these products was displayed by oxidative cleavage of the furan ring (aza-Achmatowicz reaction) to form a 1,4-dicarbonyl compound that could be further derivatized to a chiral γ-butenolide.

IT 780780-94-1P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective preparation of (aminomethyl)furans via stereoselective binol-phosphoric acid-catalyzed aza-Friedel-Crafts alkylation of methoxyfuran with N-Boc aldimines)

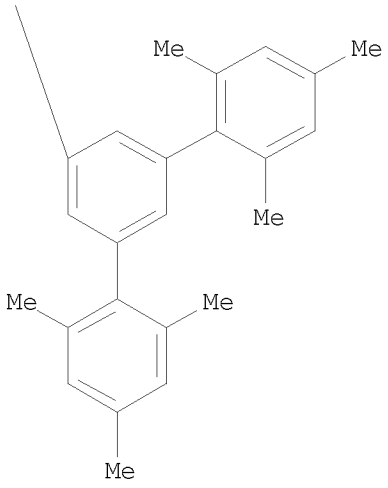
RN 780780-94-1 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis(2,2'',4,4'',6,6''-hexamethyl[1,1':3',1''-terphenyl]-5'-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)

PAGE 1-A



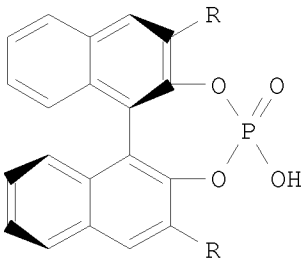
PAGE 2-A



OS.CITING REF COUNT: 134 THERE ARE 134 CAPLUS RECORDS THAT CITE THIS RECORD (140 CITINGS)
REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

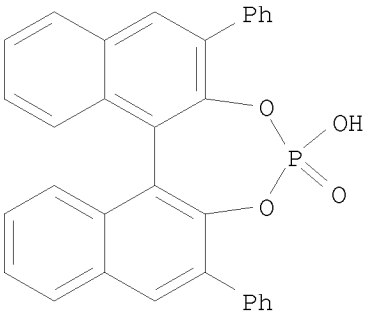
L9 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:290782 CAPLUS
DOCUMENT NUMBER: 141:23867
TITLE: Chiral Bronsted Acid-Catalyzed Direct Mannich Reactions via Electrophilic Activation
AUTHOR(S): Uraguchi, Daisuke; Terada, Masahiro
CORPORATE SOURCE: Graduate School of Science, Department of Chemistry,

Tohoku University, Sendai, 980-8578, Japan
SOURCE: Journal of the American Chemical Society (2004), 126(17), 5356-5357
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:23867
GI



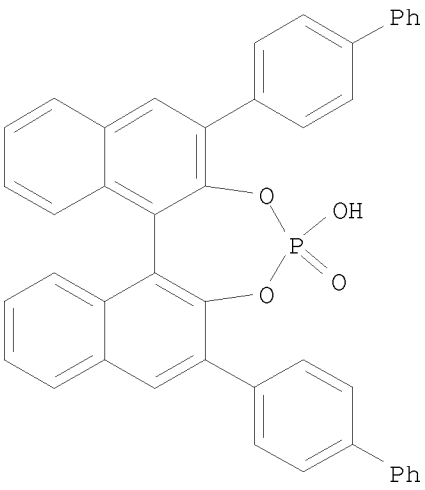
I

AB Binaphthyl phosphoric acids I [R = H, Ph, C6H4Ph-4, 4-(β-naphthyl)phenyl] serve as highly effective catalysts for the direct addition of acetyl acetone to N-Boc-protected arylimines, R1CH:NBoc (R1 = Ph, C6H4OMe-4, C6H4Me-4, C6H4Br-4, C6H4F-4, C6H4Me-2, 1-naphthyl), to afford β-amino-α-acetoxyketones R1CH(NHBoc)CH(COMe)2 in enantiomeric excess. The 3,3'-bisaryl substituents in I have pos. effects on the enantioselectivity of the catalysts, such that I [R = 4-(β-naphthyl)phenyl] was found to be an excellent catalyst. For example, in the Mannich reaction between PhCH:NBoc and acetyl acetone, the above catalyst enabled the formation of BocNHCH(Ph)CH(COMe)2 in 99% yield with 95% enantiomeric excess. The stereochem. course of this reaction was established through the synthesis of (S)-BocNHCH(Ph)CO2Me. The transformation thus demonstrated is applicable to a useful method for the synthesis of various phenylglycine derivs.
IT 695162-86-8 699006-54-7
RL: CAT (Catalyst use); USES (Uses)
(chiral binaphthyl phosphoric acids as Bronsted acid catalysts for asym. Mannich reactions of Boc-protected arylimines)
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 699006-54-7 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-bis([1,1'-biphenyl]-4-yl)-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX

NAME)



IT 699006-55-8P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral binaphthyl phosphoric acids as Bronsted acid catalysts for asym. Mannich reactions of Boc-protected arylimines)

RN 699006-55-8 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis[4-(2-naphthalenyl)phenyl]-, 4-oxide, (11bR)- (9CI) (CA INDEX NAME)

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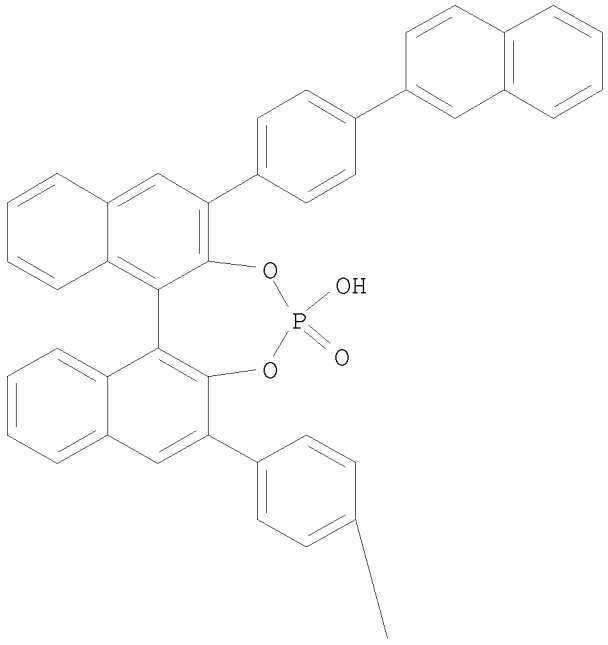
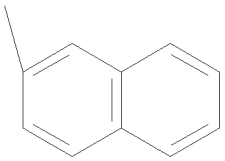
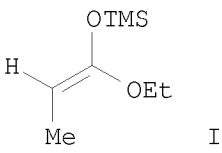




OS.CITING REF COUNT: 253 THERE ARE 253 CAPLUS RECORDS THAT CITE THIS RECORD (270 CITINGS)
REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:279336 CAPLUS
DOCUMENT NUMBER: 141:6902
TITLE: Enantioselective Mannich-type reaction catalyzed by a chiral Bronsted acid
AUTHOR(S): Akiyama, Takahiko; Itoh, Junji; Yokota, Koji; Fuchibe, Kohei
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Gakushuin University, Toshima-ku, Tokyo, 171-8588, Japan
SOURCE: Angewandte Chemie, International Edition (2004), 43(12), 1566-1568
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:6902
GI



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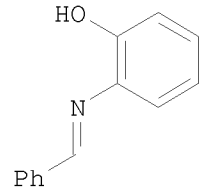

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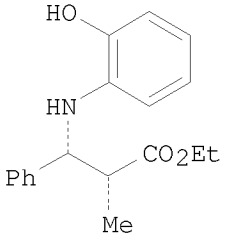

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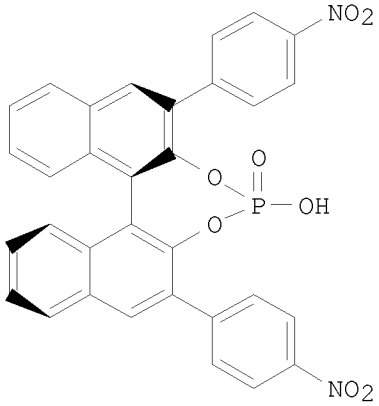


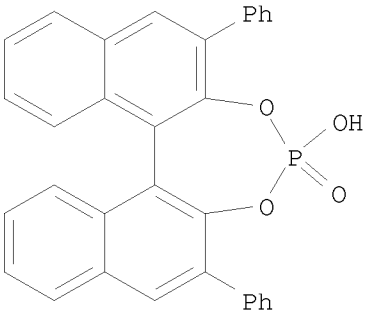
IV

AB The Mannich-type reaction of ketene silyl acetals, e.g., I, with

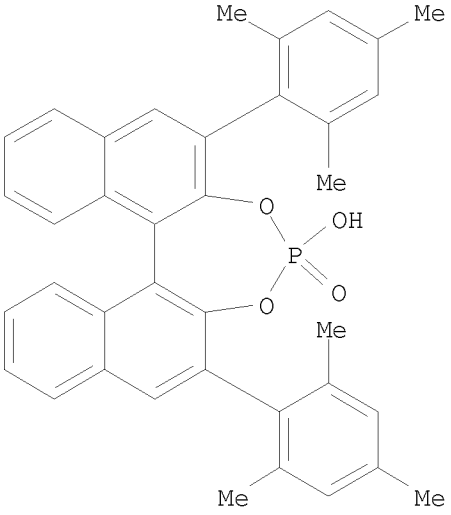
aldimines, e.g., II, proceeded highly enantioselectively to afford the syn isomer of β amino esters, e.g., III, with up to 96% ee under the influence of a chiral Bronsted acid IV derived from (R)-BINOL.

IT 695162-86-8 695162-87-9 695162-88-0
695162-89-1
RL: CAT (Catalyst use); USES (Uses)
(stereoselective preparation of aminoesters via chiral Bronsted acid catalyzed Mannich-type reaction of aldimines with ketene silyl acetals under metal-free conditions)

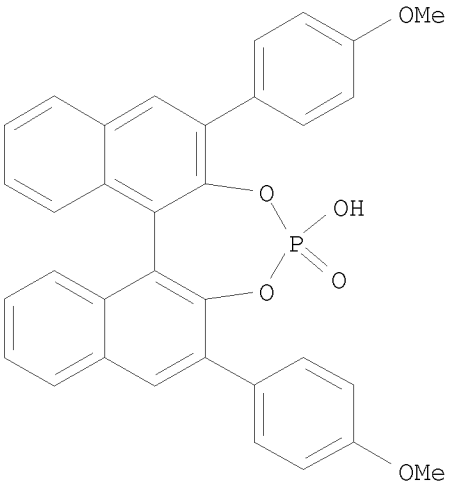
RN 695162-86-8 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-diphenyl-, 4-oxide, (11bR)- (CA INDEX NAME)



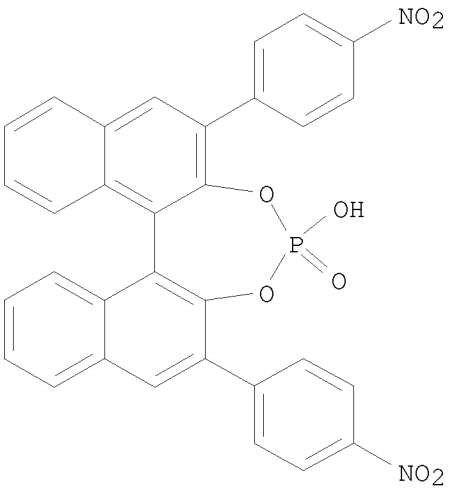
RN 695162-87-9 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(2,4,6-trimethylphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-88-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-methoxyphenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 695162-89-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis(4-nitrophenyl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 264 THERE ARE 264 CAPLUS RECORDS THAT CITE THIS RECORD (271 CITINGS)
REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

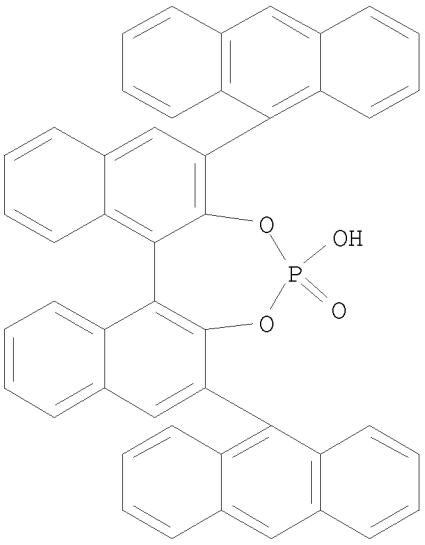
L9 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:691761 CAPLUS
DOCUMENT NUMBER: 135:257051
TITLE: Optically active phosphate derivative and its use
INVENTOR(S): Inanaga, Junji
PATENT ASSIGNEE(S): Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1134209	A1	20010919	EP 2001-105920	20010309 <--
EP 1134209	B1	20030827		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 20010031887	A1	20011018	US 2001-801041	20010308 <--
US 6391926	B2	20020521		
JP 2001328995	A	20011127	JP 2001-68370	20010312 <--
PRIORITY APPLN. INFO.:			JP 2000-73997 A	20000313

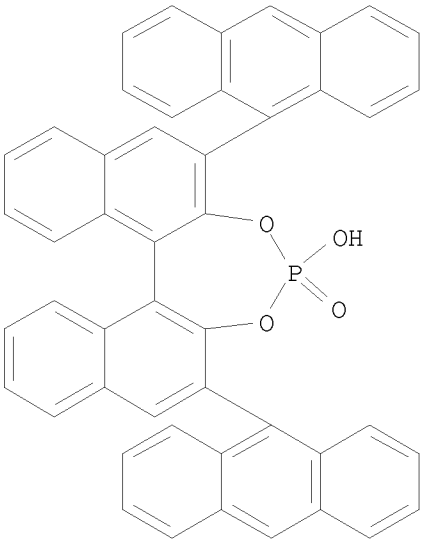
AB The present invention includes optically active binaphthol derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'diol (I), optically active phosphate derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'-diyl phosphonic acid (II), processes for their production, and a chiral shift reagent comprising the derivative of II. Thus, (R)-I (preparation and spectral data given) was treated with phosphorous oxychloride and hydrolyzed to give (R)-II (70%), the efficacy of which as an asymmetry identifying agent, when subjected to (±)-1-phenylethyl alc., (±)-1-phenyl-1-methoxy acetic acid, (±)-2-octanol, (±)-2-butanol, and (±)-phenylmethyl sulfoxide, was measured by NMR.

IT 361342-51-0P 361342-52-1P
RL: ARG (Analytical reagent use); IMF (Industrial manufacture); NUU (Other use, unclassified); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(preparation and use as chiral shift reagent on racemic compds.)

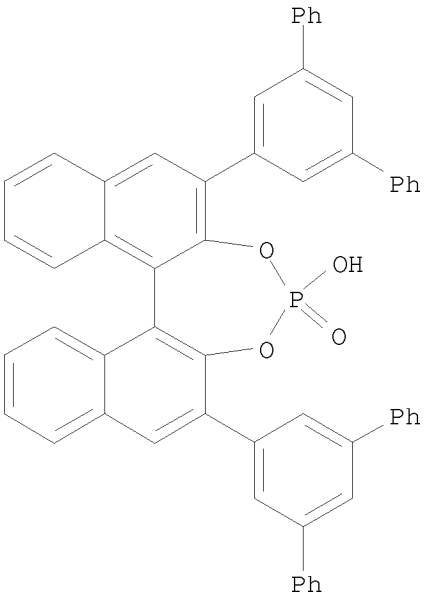
RN 361342-51-0 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bR)- (CA INDEX NAME)



RN 361342-52-1 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 2,6-di-9-anthracenyl-4-hydroxy-, 4-oxide, (11bS)- (CA INDEX NAME)



IT 361342-55-4
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(use as chiral shift reagent on racemic compds.)
RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:502876 CAPLUS

DOCUMENT NUMBER: 133:238193
TITLE: Dendritic, 1,1'-binaphthalene-derived cleft-type receptors (Dendroclefts) for the molecular recognition of pyranosides
AUTHOR(S): Bahr, Anja; Felber, Beatrice; Schneider, Katharina; Diederich, Francois
CORPORATE SOURCE: Laboratorium fur Organische Chemie, Eidgenossische Technische Hochschule, ETH-Zentrum, Zurich, CH-8092, Switz.
SOURCE: Helvetica Chimica Acta (2000), 83(7), 1346-1376
CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:238193
AB Two series of optically active, cleft-type dendritic receptors (dendroclefts) for carbohydrate recognition were prepared by attaching Frechet-type dendrons via ethynediyl linkers to a core consisting of one or two 1,1'-binaphthalene-2,2'-diyl phosphate moieties. Sugar substrates were expected to bind via bidentate ionic H-bonding of two OH groups to the phosphodiester core and, addnl., to undergo van der Waals and CH.tplbond.π interactions with the aromatic rings of the surrounding dendritic wedges. The synthesis of the dendritic receptors with a single binaphthalene core started from 3,3'-diethynylated MOM-protected (MOM = methoxymethyl) 1,1'-binaphthalene-2,2'-diol to which the Frechet-type dendrons of generations were attached via Sonogashira cross-coupling. MOM-Ether deprotection followed by phosphodiester formation and ion exchange provided the targeted receptors. 1H-NMR Complexation studies with the dendritic receptors containing one binaphthalene core and octyl glycosides 53-55 in CD3CN and CDCl3 revealed that ionic H-bonding between the phosphodiester core in the dendritic receptors and the sugar OH groups provides the major driving force for stoichiometric 1:1 host-guest association A smaller, yet significant contribution to the binding free enthalpy was also provided by interactions between the sugar guests and the dendritic wedges. Binding selectivity was weak in all cases, and only small changes in association strength were observed as a function of dendritic generation. In studies with the dendritic receptors, which contain two binaphthalene moieties at the core, higher-order complex stoichiometries prevented the determination of quant. binding data. As a result of unfavorable steric interactions between the dendritic wedges, these flexible receptor systems apparently avoid adopting the "syn"-conformation with convergent phosphodiester sites that is required for efficient 1:1 host-guest complexation.
IT 293727-18-1P 293727-19-2P 293727-20-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(dendritic binaphthalene-derived cleft-type receptors dendroclefts for the mol. recognition of pyranosides)
RN 293727-18-1 CAPLUS
CN α-D-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

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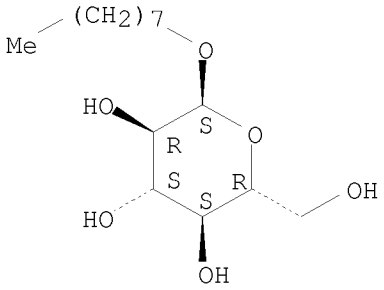
CRN 29781-80-4
CMF C14 H28 O6

Absolute stereochemistry. Rotation (+).



CM 2

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CM 3

CRN 293726-76-8
CMF C60 H44 O8 P

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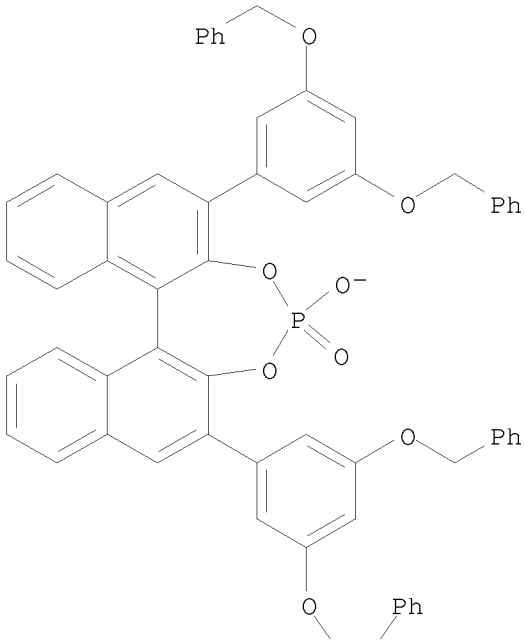

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CM 4

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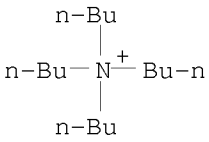
CMF C16 H36 N

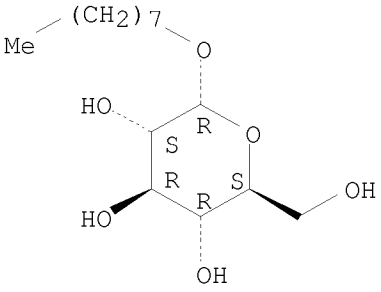


RN 293727-19-2 CAPLUS
CN α-L-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 142925-45-9
CMF C14 H28 O6

Absolute stereochemistry.



CM 2

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CM 3

CRN 293726-76-8
CMF C60 H44 O8 P

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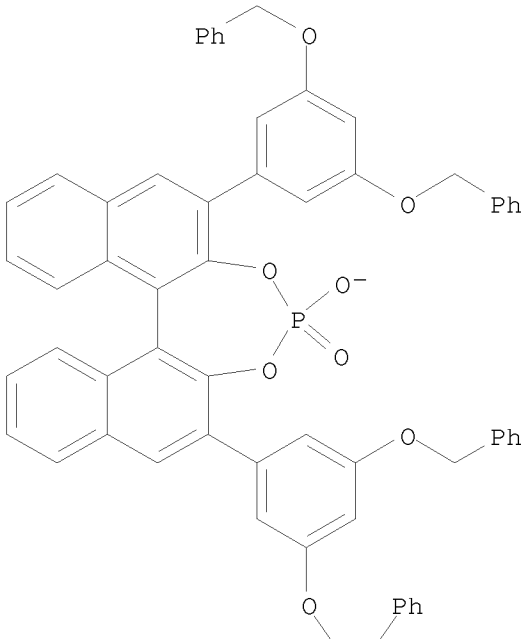

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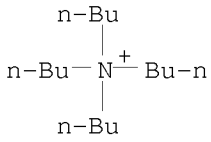

RN 293727-20-5 CAPLUS
CN β-D-Glucopyranoside, octyl, compd. with N,N,N-tributyl-1-butanaminium salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1:1) (9CI) (CA INDEX NAME)

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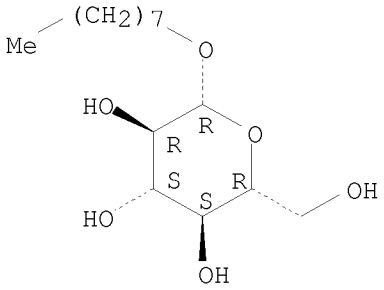
CRN 29836-26-8
CMF C14 H28 O6

Absolute stereochemistry. Rotation (-).



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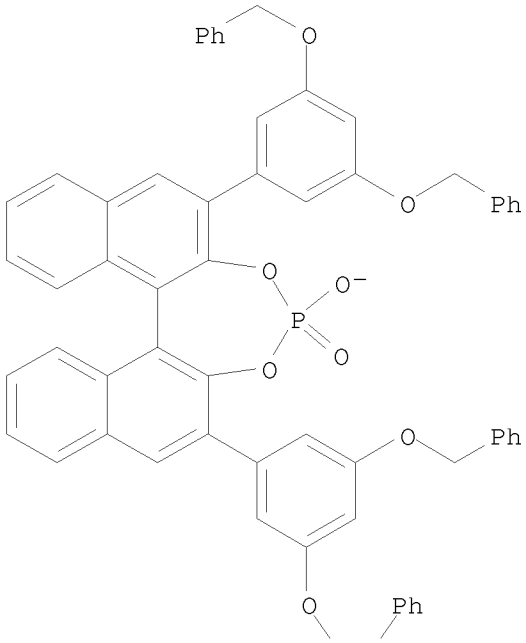

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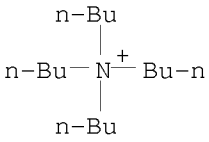
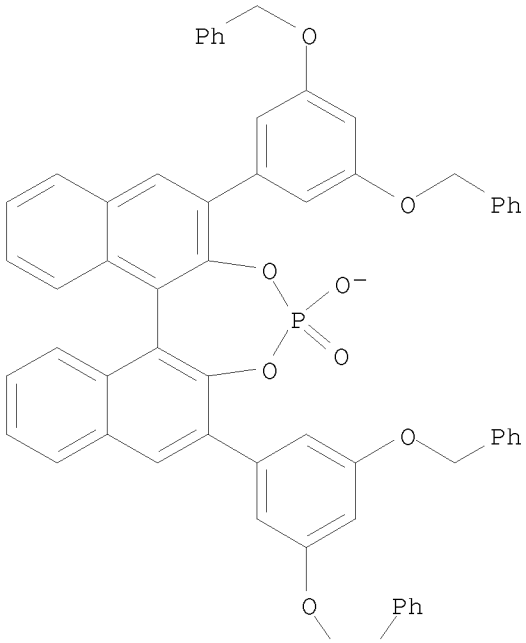


IT 293726-77-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(dendritic binaphthalene-derived cleft-type receptors dendroclefts for the mol. recognition of pyranosides)
RN 293726-77-9 CAPLUS
CN 1-Butanaminium, N,N,N-tributyl-, salt with (11bS)-2,6-bis[3,5-bis(phenylmethoxy)phenyl]-4-hydroxydinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin 4-oxide (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 293726-76-8
CMF C60 H44 O8 P

PAGE 1-A



PAGE 2-A

CM 2

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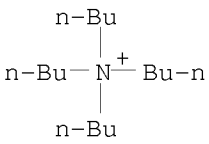
CMF C16 H36 N



OS.CITING REF COUNT: 40 THERE ARE 40 CAPLUS RECORDS THAT CITE THIS RECORD (40 CITINGS)
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=> s 361342-55-4/rn
L10 1 361342-55-4/RN

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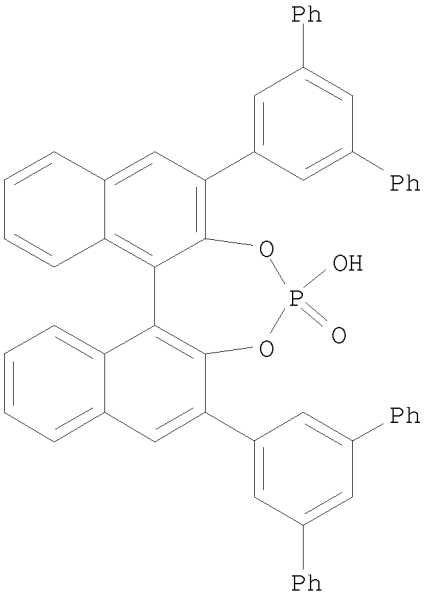
L10 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2009 ACS on STN
RN 361342-55-4 REGISTRY
ED Entered STN: 10 Oct 2001
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA

INDEX NAME)
MF C56 H37 O4 P
SR CA
LC STN Files: CA, CAPLUS, CASREACT, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

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FULL ESTIMATED COST	2.53	472.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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FILE COVERS 1907 - 27 Jul 2009 VOL 151 ISS 5
FILE LAST UPDATED: 26 Jul 2009 (20090726/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2009

CAplus now includes complete International Patent Classification (IPC)
reclassification data for the second quarter of 2009.

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of databases have been updated to include new citing references
information. This enhancement may impact record import into
database management software. For additional information, refer
to NEWS 22.

=> s l10
L11   4 L10

=> d l11 14 ibib abs hitstr
      4 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):4

L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:691761 CAPLUS
DOCUMENT NUMBER: 135:257051
TITLE: Optically active phosphate derivative and its use
INVENTOR(S):   Inanaga, Junji
PATENT ASSIGNEE(S):   Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
                          CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

     PATENT NO.   KIND   DATE   APPLICATION NO.   DATE
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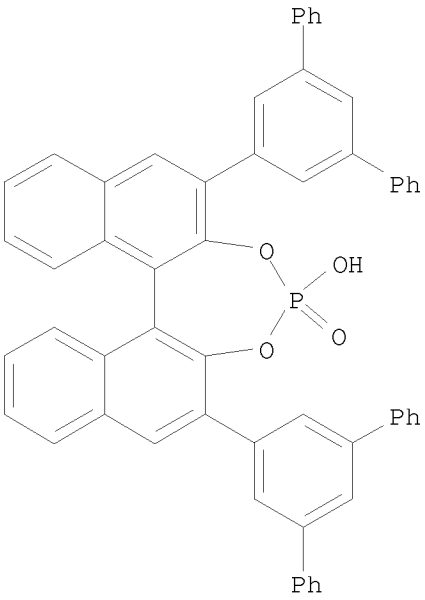
     EP 1134209   A1   20010919   EP 2001-105920   20010309
     EP 1134209   B1   20030827
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     US 20010031887   A1   20011018   US 2001-801041   20010308
     US 6391926   B2   20020521
     JP 2001328995   A   20011127   JP 2001-68370   20010312
PRIORITY APPLN. INFO.:   JP 2000-73997   A   20000313
AB   The present invention includes optically active binaphthol derivs. (R) or
     (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'diol (I), optically active
     phosphate derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'-diyl
     phosphonic acid (II), processes for their production, and a chiral shift
     reagent comprising the derivative of II. Thus, (R)-I (preparation and spectral
     data given) was treated with phosphorous oxychloride and hydrolyzed to
     give (R)-II (70%), the efficacy of which as an asymmetry identifying
     agent, when subjected to (±)-1-phenylethyl alc.,
     (±)-1-phenyl-1-methoxy acetic acid, (±)-2-octanol, (±)-2-butanol,

and (±)-phenylmethyl sulfoxide, was measured by NMR.

IT 361342-55-4
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(use as chiral shift reagent on racemic compds.)

RN 361342-55-4 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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'1-\4' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

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CAN --------- List of CA abstract numbers without answer numbers
CBIB -------- AN, plus Compressed Bibliographic Data
CLASS ------- IPC, NCL, ECLA, FTERM
DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
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              e.g., D SCAN or DISPLAY SCAN)
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IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT ---------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC ---------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
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All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):
ENTER DISPLAY FORMAT (BIB):

L11  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2009 ACS on STN
AN   2009:437690  CAPLUS
DN   151:8093
TI   Activation of hemiaminal ethers by chiral Bronsted acids for facile access
     to enantioselective two-carbon homologation using enecarbamates
AU   Terada, Masahiro; Machioka, Kyoko; Sorimachi, Keiichi
CS   Department of Chemistry, Graduate School of Science, Tohoku University,
     Sendai, 980-8578, Japan
SO   Angewandte Chemie, International Edition (2009), 48(14), 2553-2556
     CODEN: ACIEF5; ISSN: 1433-7851
PB   Wiley-VCH Verlag GmbH & Co. KGaA
DT   Journal
LA   English
OSC.G   1     THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
RE.CNT  101   THERE ARE 101 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
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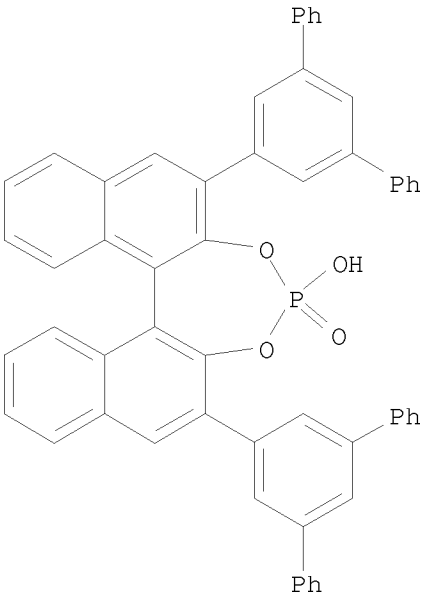
L11 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:437690 CAPLUS
DOCUMENT NUMBER: 151:8093
TITLE: Activation of hemiaminal ethers by chiral Bronsted acids for facile access to enantioselective two-carbon homologation using enecarbamates
AUTHOR(S): Terada, Masahiro; Machioka, Kyoko; Sorimachi, Keiichi
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan
SOURCE: Angewandte Chemie, International Edition (2009), 48(14), 2553-2556
CODEN: ACIEF5; ISSN: 1433-7851
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chiral phosphoric acids have been used to catalyze the title transformation for aromatic and aliphatic hemiaminal ethers. The process affords the corresponding products in good to high enantioselectivity. The method enables facile access to highly enantioenriched 1,3-diamine derivs.
IT 361342-55-4
RL: CAT (Catalyst use); USES (Uses)
(activation of hemiaminal ethers by chiral Bronsted acids for enantioselective two-carbon homologation of enecarbamates)
RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 101 THERE ARE 101 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

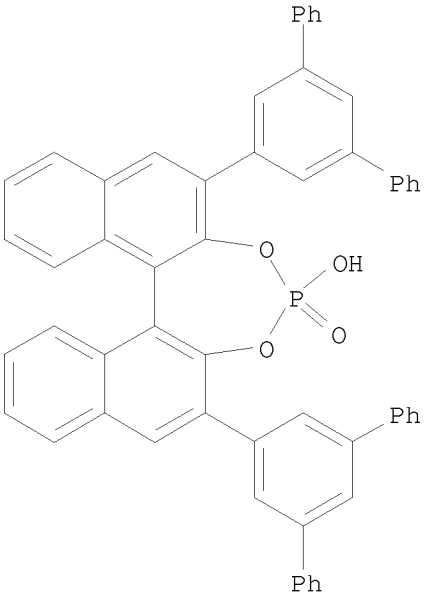
L11 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:1036156 CAPLUS
DOCUMENT NUMBER: 149:267837
TITLE: Chiral phosphoric acid-catalyzed enantioselective aza-Friedel-Crafts reaction of indoles
AUTHOR(S): Terada, Masahiro; Yokoyama, Shigeko; Sorimachi, Keiichi; Uraguchi, Daisuke
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Aramaki, Aoba-ku, Sendai, 980-8578, Japan
SOURCE: Advanced Synthesis & Catalysis (2007), 349(11+12), 1863-1867
CODEN: ASCAF7; ISSN: 1615-4150
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 149:267837

AB A highly enantioselective 1,2-aza-Friedel-Crafts reaction of N-tert-butyldimethylsilylindole with N-tert-butoxycarbonyl aromatic imines is demonstrated using a BINOL-derived monophosphoric acid catalyst. The present approach provides efficient access to 3-indolylmethanamines with aryl substituents in excellent enantioselectivities (up to 98% ee). An inversion in the sense of enantioselection was found between monophosphoric acid catalysts bearing different substituents introduced at the 3,3'-position of binaphthyl backbone. The authors also calculated the three-dimensional structure of the monophosphoric acid catalysts to speculate on the inversion of the stereochem. outcome.

IT 361342-55-4
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(DFT study; chiral binaphthyldiyl phosphoric acid-catalyzed enantioselective aza-Friedel-Crafts reaction of indoles with N-Boc aromatic imines)

RN 361342-55-4 CAPLUS
CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



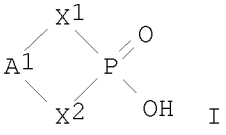
OS.CITING REF COUNT: 23 THERE ARE 23 CAPLUS RECORDS THAT CITE THIS RECORD (23 CITINGS)

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:696866 CAPLUS
DOCUMENT NUMBER: 143:193554
TITLE: Process for production of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles using chiral phosphoric acid derivative
INVENTOR(S): Terada, Masahiro; Uraguchi, Daisuke; Sorimachi, Keiichi; Shimizu, Hideo
PATENT ASSIGNEE(S): Takasago International Corporation, Japan
SOURCE: PCT Int. Appl., 176 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005070875	A1	20050804	WO 2005-JP962	20050126
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 20070142639	A1	20070621	US 2006-587279	20061012
PRIORITY APPLN. INFO.:			JP 2004-17725 A	20040126
			WO 2005-JP962 W	20050126

OTHER SOURCE(S): MARPAT 143:193554
GI



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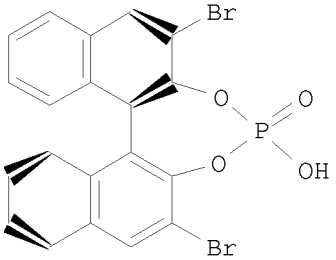


II

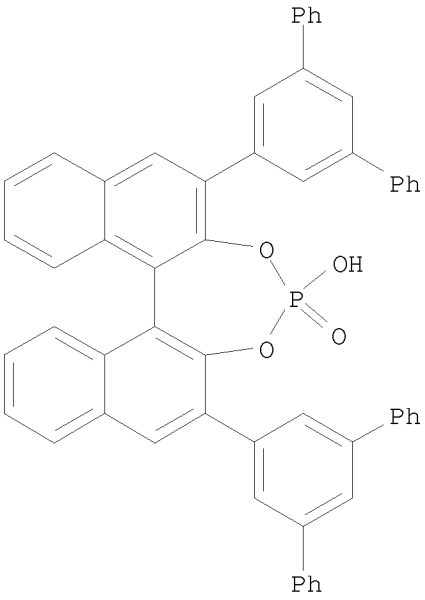
AB A process for the production of amines comprises reacting an imine with a nucleophilic compound (except trialkylsilyl vinyl ethers) in the presence of a phosphoric acid derivative represented by the general formula (I) (wherein A1 = a spacer; X1, X2 = independently a divalent nonmetal atom or divalent nonmetal atomic group; Y1 = O, S). The invention provides a process by which amines (particularly optically active amines) useful as intermediates of drugs, agricultural chems., or the like can be produced without special post-treatment in high yield at high optical purity; and phosphoric acid derivs. (particularly optically active phosphoric acid derivs.) useful in

the production of the amines. Thus, 0.11 mmol acetylacetone was added to a solution of 0.002 phosphoric acid derivative (II) and 0.1 mmol PhCH:NCOPh in 800
μL CDCl3 under N and stirred for 5.5 h to give 99% optically active PHCH(NHPh)CH(COMe)2 (61% optical yield).

IT 361342-55-4
RL: CAT (Catalyst use); USES (Uses)
(preparation of optically active amines by stereoselective nucleophilic addition reaction of imines with C nucleophiles in presence of chiral phosphoric acid derivative)

RN 361342-55-4 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:691761 CAPLUS
DOCUMENT NUMBER: 135:257051
TITLE: Optically active phosphate derivative and its use
INVENTOR(S): Inanaga, Junji
PATENT ASSIGNEE(S): Tosoh Corporation, Japan
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1134209	A1	20010919	EP 2001-105920	20010309
EP 1134209	B1	20030827		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO

US 20010031887	A1	20011018	US 2001-801041	20010308
US 6391926	B2	20020521		
JP 2001328995	A	20011127	JP 2001-68370	20010312

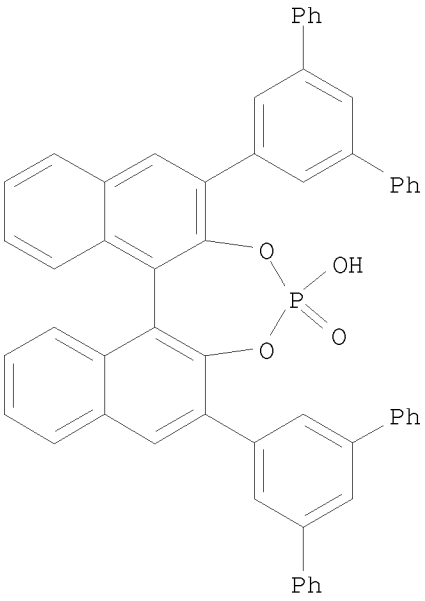
PRIORITY APPLN. INFO.: JP 2000-73997 A 20000313

AB The present invention includes optically active binaphthol derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'diol (I), optically active phosphate derivs. (R) or (S)-3,3'-bis(9-anthryl)-1,1'-binaphthyl-2,2'-diyl phosphonic acid (II), processes for their production, and a chiral shift reagent comprising the derivative of II. Thus, (R)-I (preparation and spectral data given) was treated with phosphorous oxychloride and hydrolyzed to give (R)-II (70%), the efficacy of which as an asymmetry identifying agent, when subjected to (±)-1-phenylethyl alc., (±)-1-phenyl-1-methoxy acetic acid, (±)-2-octanol, (±)-2-butanol, and (±)-phenylmethyl sulfoxide, was measured by NMR.

IT 361342-55-4
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(use as chiral shift reagent on racemic compds.)

RN 361342-55-4 CAPLUS

CN Dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin, 4-hydroxy-2,6-bis([1,1':3',1''-terphenyl]-5'-yl)-, 4-oxide, (11bR)- (CA INDEX NAME)



OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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